

EXHIBIT 1

APPENDIX A**GROUNDS FOR EXCLUSION OF ARM'S EXPERT OPINIONS AND CORRESPONDING PARAGRAPHS****Todd Schoettelkotte**

Grounds for Exclusion of Expert Opinions	Corresponding Paragraphs
Schoettelkotte provides no independent opinion of harm.	<p>Schoettelkotte 12/20/2023 Rep. ¶¶ 10–17, 69–140.</p> <p>Schoettelkotte 3/25/2024 Rep. ¶¶ 11, 13–28, 30–31, 34, 36, 39, 41–42, 45–48, 50–51, 53, 56–59, 61–63, 65.</p>
Schoettelkotte provides no opinion on the probability of harm.	<p>Schoettelkotte 12/20/2023 Rep. ¶¶ 10–17, 69–140.</p> <p>Schoettelkotte 3/25/2024 Rep. ¶¶ 11, 13–28, 30–31, 34, 36, 39, 41–42, 45–48, 50–51, 53, 56–59, 61–63, 65.</p>
Schoettelkotte's opinions are speculative and unreliable.	<p>Schoettelkotte 12/20/2023 Rep. ¶¶ 10–17, 69–140.</p> <p>Schoettelkotte 3/25/2024 Rep. ¶¶ 11, 13–28, 30–31, 34, 36, 39, 41–42, 45–48, 50–53, 56–59, 61–63, 65–66.</p>

Guhan Subramanian

Grounds for Exclusion of Expert Opinions	Corresponding Paragraphs
Subramanian’s opinions about the meaning and scope of contracts are improper.	<p>Subramanian 12/20/2023 Rep. ¶¶ 19, 53–66, 68–69, 71, 76, 78–86, 96, 98.</p> <p>Subramanian 3/25/2024 Rep. ¶¶ 5, 7, 10–22, 27–35, 37, 39–41.</p>
Subramanian’s opinions about the parties’ intent or state of mind are improper.	<p>Subramanian 12/20/2023 Rep. ¶¶ 19, 51–53, 55–78, 84–86, 88, 90, 94–100.</p> <p>Subramanian 3/25/2024 Rep. ¶¶ 5, 7, 10, 15, 18–22, 24–26, 39, 45.</p>
Subramanian’s opinions about negotiation theory do not “fit” the case.	<p>Subramanian 12/20/2023 Rep. ¶¶ 19, 30–50, 52–53, 55, 63–66, 78, 84–89, 91–94.</p> <p>Subramanian 3/25/2024 Rep. ¶¶ 5, 10, 15, 25–27, 39, 44–45, 48–49.</p>
Subramanian’s opinion that “non-enforcement could have negative follow-on effects that are impossible to quantify” is speculative and not reliable.	<p>Subramanian 12/20/2023 Rep. ¶¶ 19, 93–101.</p> <p>Subramanian 3/25/2024 Rep. ¶¶ 5, 42–49.</p>

Ravi Dhar

Grounds for Exclusion of Expert Opinions	Corresponding Paragraphs
Dhar's opinion on the likelihood of confusion is unreliable and does not "fit" the case.	Dhar 12/20/2023 Rep. ¶¶ 15, 112–15, 117–21. Dhar 3/25/2024 Rep. ¶¶ 3, 14–37, 42–52.
Dhar's opinions on the significance of the Arm brand are unreliable.	Dhar 12/20/2023 Rep. ¶¶ 13, 78–106. Dhar 3/25/2024 Rep. ¶¶ 3, 4–13.
Dhar's opinion that there is likelihood of harm is <i>ipse dixit</i> .	Dhar 12/20/2023 Rep. ¶¶ 16, 122–33. Dhar 3/25/2024 Rep. ¶¶ 3, 42, 53–57.
Dhar's opinion on fair use constitutes an improper legal opinion.	Dhar 12/20/2023 Rep. ¶¶ 134–37. Dhar 3/25/2024 Rep. ¶¶ 38–42.

Shuo-Wei (Mike) Chen

Grounds for Exclusion of Expert Opinions	Corresponding Paragraphs
Chen's quantitative opinions do not "fit" the issues in this case.	Chen 12/20/2023 Rep. ¶¶ 18, 20–35. Chen 3/25/2024 Rep. ¶¶ 7–41.
Chen's quantitative opinions are methodologically flawed.	Chen 12/20/2023 Rep. ¶¶ 18, 20–35. Chen 3/25/2024 Rep. ¶¶ 7–41.
Chen's qualitative opinions are irrelevant and unreliable.	Chen 12/20/2023 Rep. ¶¶ 19, 36–53. Chen 3/25/2024 Rep. ¶¶ 7, 42–59.
Chen's reply offers new opinions absent from his opening report.	Chen 3/25/2023 Rep. ¶¶ 7, 10, 13, 14, 15, 17, 18, 20–22, 24, 35, 42–59.

Robert Colwell

Grounds for Exclusion of Expert Opinions	Corresponding Paragraphs
Colwell's opinions rely on Chen's unreliable opinions.	<p>Colwell 12/20/2023 Rep. ¶¶ 26, 109, 160–67, 171, 175–76.</p> <p>Colwell 2/27/2024 Rep. ¶¶ 31–34.</p> <p>Colwell 3/25/2024 Rep. ¶¶ 4 (to the extent Colwell references Chen), 14, 28, 111–12.</p>
Colwell's opinions are not relevant because he failed to use terms as defined in the contract.	<p>Colwell 12/20/2023 Rep. ¶¶ 3, 74–89, 95, 110–11, 113, 115, 117–23, 129–33, 135–39, 141–48, 153–55, 162, 166–69, 178–80, 182.</p> <p>Colwell 2/27/2024 Rep. ¶¶ 5, 6, 11, 14, 19–26, 29, 37, 41</p> <p>Colwell 3/25/2024 Rep. ¶¶ 8–13, 16–108.</p>
Colwell's counterclaim opinions exceed the scope of Murali Annavaram's opening report.	Colwell 6/10/2024 Rep. ¶¶ 4, 34–59, 62, 63, 65, 66, 68, 69, 70, 72, 73, 75, 77–86, 93, 94, 97, 98–102, 109, 111–14, 120.

EXHIBIT 2

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ARM LTD., a U.K. corporation,

Plaintiff,

V.

C.A. No. 22-1146 (MN))

QUALCOMM, INC., a Delaware corporation, QUALCOMM TECHNOLOGIES, INC., a Delaware corporation, and NUVIA, INC., a Delaware corporation

Defendants.

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EXPERT REPORT OF W. TODD SCHOETTELKOTTE

RELATING TO REMEDIES FOR DEFENDANTS' BREACH OF CONTRACT

I DECLARE UNDER PENALTY OF PERJURY THAT THE FOLLOWING IS TRUE AND CORRECT.

I DECLARE UNDER PENALT

W. TODD SCHOETTELKOTTE

12-20-23

EXECUTED ON

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I. INTRODUCTION

1. Plaintiff Arm Ltd. ("Arm" or "Plaintiff") has accused Defendants Qualcomm Inc., Qualcomm Technologies, Inc. (collectively, "Qualcomm") and Nuvia, Inc. ("Nuvia") (both collectively, "Defendants") of breaching the Nuvia Architecture License Agreement (the "Nuvia ALA").¹ More specifically, I understand Arm alleges that Nuvia was acquired by Qualcomm without Arm's consent to assignment of the Nuvia ALA, and that Nuvia therefore breached [REDACTED] of the Nuvia ALA.² I understand that Arm further alleges that subsequent to Arm's termination of the Nuvia ALA, [REDACTED] [REDACTED]
[REDACTED]
[REDACTED] As a remedy for Defendants' breach of the Nuvia ALA, I understand that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2. I have been retained as an expert on behalf of Arm to assess and provide testimony regarding whether damages are adequate to compensate Arm for the harm caused by Defendants' breach of the Nuvia ALA. For purposes of this report, and to address this issue, I

¹ Complaint, August 31, 2022, pp. 16 - 18.

² Complaint, August 31, 2022, pp. 10 - 11; ARM_00111064 - 080 at 078.

³ [REDACTED]

⁴ Complaint, August 31, 2022, pp. 13 - 16; ARM_00111064 - 080 at 077.

⁵ Complaint, August 31, 2022, pp. 16 - 18; ARM_00111064 - 080 at 077. I am informed and understand that Arm is not requesting that any silicon (physical computer chips) made before Qualcomm's acquisition be destroyed, to the extent there are any.

was asked to assume that Defendants are found liable for breach of the Nuvia ALA. I offer no opinion regarding liability.

3. I have also been asked to assess and provide testimony regarding the damages associated with Arm's claim for trademark infringement. I offer no opinion regarding liability.

4. My analysis, as set forth in this report, is based on information available to me as of the date of this report.

II. CREDENTIALS AND COMPENSATION

5. I am a Senior Managing Director of J.S. Held LLC ("J.S. Held"), a global consulting firm providing specialized technical, scientific, financial, and advisory services.⁶ I currently serve as the firm's Intellectual Property Practice Lead. For more than 25 years, I have provided economic and financial consulting services in a variety of litigation matters and disputes, including intellectual property, breach of contract, business interruption, valuation, and general damage assessments. These services have included analyses of irreparable harm, lost sales, lost wages, lost profits, incremental profits, price erosion, reasonable royalties, product line profitability, fixed and variable costs, cash flows, and other related financial information. I have consulted with numerous publicly traded and closely held companies in a variety of industries, including software, medical products, biotechnology, electronics, semiconductors, Internet, telecommunications, consumer products, food services, oil and gas, and others. Within the semiconductor and integrated circuit industry, my experience includes testimony and consultation on matters involving licensing disputes, patent infringement, and trade secret misappropriation related to silicon chip fabrication, integrated circuits for power conversion, as

⁶ J.S. Held and its affiliates and subsidiaries are not a certified public accounting firm and do not provide audit, attest, or any other public accounting services. J.S. Held is not a law firm and does not provide legal advice.

well as components and functionality within mobile devices, automobiles, and Field Programmable Gate Arrays ("FPGAs").

6. I am a Certified Public Accountant ("CPA"), licensed in Texas, and a Certified Valuation Analyst ("CVA"). I am a member of the American Institute of CPAs ("AICPA"), the Texas CPA Society, and the National Association of Certified Valuators and Analysts ("NACVA"). I am also a member of the Licensing Executives Society ("LES"), an organization of more than 2,500 members, including corporate executives and professionals involved in the licensing and valuation of patents, trademarks, and other intellectual property. Additionally, I have served as a Guest Lecturer at the Chicago-Kent College of Law, the Georgetown University Law Center, the John Marshall Law School, and the University of Oregon Law School on topics including accounting, valuation of intellectual property, and intellectual property management. I have been named by *Intellectual Asset Management* as one of the leading patent damages experts in the United States. Attached as Schedule 1 to this report is a summary of my professional background and testifying experience, including all publications over the last ten years and all expert testimonies over the last four years.

7. J.S. Held is compensated for my team's involvement in this matter based upon J.S. Held's hourly billing rates. My time is currently billed at a rate of \$695 per hour. J.S. Held's fee is not contingent upon the outcome of this litigation or the opinions that I express.

III. INFORMATION REVIEWED AND CONSIDERED

8. In connection with the preparation of this report, I have reviewed and considered information from a variety of sources, including documents and data produced by the parties; legal documents (and related exhibits); deposition testimony (and related exhibits); and publicly available information, articles, press releases, and Internet websites. The documents and other information that I have reviewed and considered as of the date of this report include those cited

throughout this report (including the footnotes) as well as those listed on Schedule 2 attached to this report. I have also held discussions with Arm personnel, including Will Abbey (Executive Vice President & Chief Commercial Officer at Arm), Christine Tran (Senior Director of Legal at Arm), and Paul Williamson (Senior Vice President and General Manager of IoT Line of Business at Arm), as well as Arm's technical expert, Robert Colwell, Ph.D. In addition, I have reviewed and considered the following deposition transcripts (and related exhibits):⁷

Arm Personnel

- Will Abbey, Executive Vice President & Chief Commercial Officer
- Jonathan Armstrong, Head of Brand and Creative Services
- Lynn Couillard, Vice President of Sales
- Richard Grisenthwaite, Executive Vice President & Chief Architect
- Rene Haas, Chief Executive Officer
- Tim Herbert, Vice President of North American Sales (retired)
- Simon Segars, Former Chief Executive Officer
- Karthik Shivashankar, Senior Director of Wearables and Commercial Licensing
- Christine Tran, Senior Director of Legal (rough transcript)
- Ian Thornton, Vice President of Investor Relations (rough transcript)
- Paul Williamson, Senior Vice President and General Manager of IoT Line of Business
- Mark Werkheiser, Distinguished Engineer

Nuvia Personnel

- Lynn Bos, former Technical Program Manager
- Manu Gulati, former Founder & Senior Vice President of Engineering
- Pradeep Kanapathipillai, former CPU Microarchitecture and RTL Lead
- Nitin Sharma, former CPU Verification Engineer
- Jignesh Trivedi, former CPU Verification Engineer
- Gerard Williams, III, former Founder & Chief Executive Officer

Qualcomm Personnel

- Cristiano Amon, President and Chief Executive Officer
- Ziad Asghar, Senior Vice President of Product Management
- Geeta Balakrishnan, Principal Engineer in the CAD Team

⁷ I understand that certain final deposition transcripts were not yet available to me at the time I submitted my Report. Accordingly, I may supplement my Report to incorporate the content of those final deposition transcripts.

- Ramakrishna Chunduru, former Chief Procurement Officer
- Michael Roberts, Vice President of Global Marketing
- Laura Sand, Senior Vice President, Legal Counsel
- Rohit Singh, Director of Program Management
- James Thompson, Chief Technology Officer

9. In forming my opinions in this case, I have relied upon the information and documents identified in this report, and I have also relied upon my more than 25 years of experience and expertise in analyzing remedies for misuse of intellectual property, analyzing the adequacy of damages to compensate for harms relating to the misuse of intellectual property, and assessing and calculating damages adequate to compensate for such harms. My analysis in this case is ongoing. Should additional information, such as documents or data provided by the parties, testimony, whether through expert report or deposition, or rulings issued by the Court, come to my attention after the date of this report, I may find it necessary to update or revise my analysis, opinions, and conclusions. I reserve my right to do so.

IV. LEGAL FRAMEWORK FOR DAMAGES

10. I am not an attorney and do not intend to provide any legal opinion. In forming my opinions, I have assumed a breach of the Nuvia ALA [REDACTED]

11. I am informed and understand that if Defendants breached the ALA, then [REDACTED]
[REDACTED]

[REDACTED] including the [REDACTED].

12. I am informed and understand that specific performance is appropriate only if monetary damages are not adequate to compensate Arm for the harm (including future harm) caused by Defendants' breach of the Nuvia ALA.

13. I am informed and understand that monetary damages are not adequate to compensate Arm for harm (including future harm) if those damages cannot be determined with reasonable certainty. I am informed and understand that "reasonable certainty" requires that

damages be established to a reasonable degree of certainty (or fair degree of probability), but does not require absolute certainty, absolute assurance, or mathematical exactitude as to the precise amount of damages. I am informed and understand that damages are not “reasonably certain” where they are merely speculative or conjectural.

V. SUMMARY OF OPINIONS

14. In my opinion, if Defendants are found liable for breach of the Nuvia ALA but are not ordered to discontinue the use and distribution of [REDACTED]
[REDACTED], then monetary damages are not adequate to compensate Arm for the harm (including future harm) caused by Defendants' breach of the Nuvia ALA.

15. In my opinion, the monetary damages associated with the harm to Arm (including future harm) caused by Defendants' breach of the Nuvia ALA (if Defendants are not ordered to discontinue the use and distribution of [REDACTED]
[REDACTED]) cannot be determined with reasonable certainty. In my opinion, the monetary damages associated with the following harms that may result from Defendants' breach of the Nuvia ALA, individually and collectively, cannot be determined with reasonable certainty:

- disruption to Arm's ability to control the use and distribution of Arm's intellectual property (including [REDACTED] and [REDACTED]
[REDACTED]) and to maintain Arm's licensing ecosystem;
- significant negative impact on Arm's first mover advantage;
- harm to Arm's expansion into new segments and markets;
- a decrease in licensing revenue and investment in research and development; and
- a decrease in Arm's reputation and goodwill.

16. As it relates to the disruption to Arm's ability to control the use and distribution of Arm's intellectual property (including [REDACTED]) and to maintain Arm's licensing ecosystem, Defendants' breach of the ALA could have a cascade of significant effects including:

- [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]

17. Several factors relating to Arm's intellectual property (including [REDACTED]
[REDACTED]) and the industry and market segments in which Arm's intellectual property is implemented exacerbate the difficulty of determining the monetary damages associated with the above harms, individually and collectively, with reasonable certainty. Those factors include the following:

- Qualcomm is a long-term Arm licensee and one of Arm's largest licensees by revenue which may magnify the signal sent to existing and prospective Arm licensees about Arm's ability to control its intellectual property;
- The relative speed with which the CPU industry develops which means that the short-term as well as longer-term harms resulting from Defendants' breach are difficult to predict and could lead to large and unforeseeable impacts (*e.g.*, in a "butterfly effect" type manner);
- The acute uncertainty of the harms given the actions of current and prospective licensees, and unknown emerging market segments, among other uncertainties. Such factors include (but are not limited to) the inability to quantify the number prospective licensees and related revenue,

as well as the difficulty in measuring the financial impact of actions that current and prospective licensees may take based on the decisions of other licensees.

VI. BACKGROUND

A. Industry Overview

i. CPU Background

18. Modern computing devices (including mobile phones, personal computers, cloud computing devices, servers and autonomous vehicles) operate by the use of a central processing unit (“CPU”), sometimes simply referred to as a “processor.”⁸ CPUs are the component of a computing device which “performs arithmetic, logic, and other operations to transform data input into more usable information output,” and are comprised of “a complex set of electronic circuitry that runs the machine’s operating system and apps.”⁹ A “CPU core” or “processor core” is the “processing unit within the CPU that can execute instructions. The more cores a CPU has, the more tasks it can handle simultaneously.”¹⁰ The number of cores within a CPU can vary “depending on their intended use case. For example, a mobile-focused CPU might have fewer cores in order to conserve battery life, while a desktop-focused CPU might have more cores for improved performance.”¹¹ One or more CPUs (each including one or more cores) can be integrated onto a System-on-a-Chip (“SoC”).¹² An SoC is a single package that contains one or more CPUs (each including one or more cores) along with other components such as “memory, input and output ports, peripheral interfaces and secondary storage devices.”¹³

⁸ https://semiengineering.com/knowledge_centers/integrated-circuit/ic-types/processors/central-processing-unit-cpu/; Discussions with Robert Colwell.

⁹ <https://www.arm.com/glossary/cpu>; Discussions with Robert Colwell.

¹⁰ <https://www.lenovo.com/us/en/glossary/cpu-core/>.

¹¹ <https://www.lenovo.com/us/en/glossary/cpu-core/>; Discussions with Robert Colwell.

¹² <https://www.arm.com/glossary/soc-development>; <https://www.arm.com/glossary/cpu>.

¹³ <https://www.arm.com/glossary/soc-development>; <https://www.arm.com/glossary/cpu>; Discussions with Robert Colwell.

19. A CPU is defined by architecture that allows the CPU to interface between the hardware of a computing device and its software.¹⁴ These interfaces are referred to as “instruction set architectures” or “ISAs.”¹⁵ There are two different architectures, or “schools of thought,” “about how a processor’s [ISA] is designed:” Complex Instruction Set Computers (“CISC”) and Reduced Instruction Set Computer (“RISC”).¹⁶ CISC architecture “supports complex instructions that can be carried out across multiple clock cycles, while RISC must use simple instructions that can be executed within a single cycle.”¹⁷ The most commonly used architecture for ISAs is RISC.¹⁸ RISC is “is an alternative to the Complex Instruction Set Computing (CISC) architecture and is often considered the most efficient CPU architecture technology available today.”¹⁹ When compared to CISC, RISC has a “significantly higher architecturally-determined performance.”²⁰ ARM, or “Advanced RISC Machine” is a specific family of instruction set architecture that is based on RISC and was developed by Arm.²¹ Arm architecture, including its RISC-based ISAs, are “are common in smartphones, tablets, laptops, gaming consoles and desktops, as well as a growing number of other intelligent devices.”²²

20. The global market for microprocessor chips is estimated to increase from \$106 billion in 2022 to \$185.39 billion by 2032, at a compound annual growth rate (“CAGR”) of 5.8%.²³ With this comes the continued efforts to innovate the microprocessor market. A “common

¹⁴ <https://www.arm.com/glossary/isa>; Discussions with Robert Colwell.

¹⁵ <https://www.arm.com/glossary/isa>; Discussions with Robert Colwell.

¹⁶ <https://www.gigabyte.com/Glossary/cisc>; Discussions with Robert Colwell.

¹⁷ <https://www.gigabyte.com/Glossary/cisc>.

¹⁸ <https://www.precedenceresearch.com/microprocessor-market>.

¹⁹ <https://www.arm.com/glossary/risc>.

²⁰ Bhandarkar, Dileep, and Douglas W. Clark. “Performance from architecture: comparing a RISC and a CISC with similar hardware organization.” *Proceedings of the fourth international conference on Architectural support for programming languages and operating systems*. 1991, p. 318.

²¹ <https://www.arm.com/glossary/risc>.

²² <https://www.arm.com/glossary/risc>.

²³ <https://www.precedenceresearch.com/microprocessor-market>.

advancement[] in CPU technology is making []transistors smaller and smaller.”²⁴ A smaller process node (which is comprised of transistors that are used to “perform all the of number crunching and data storage done inside the chip”) translates “to a higher number of calculations per second – and less energy released as heat.”²⁵ The dramatic improvement in CPU speeds over the decades is often referred to as “Moore’s Law,”²⁶ which “is the observation that the number of transistors on an integrated circuit will double every two years with minimal rise in cost”²⁷

ii. CPU Use in Various Segments

21. CPUs are used in numerous applications or segments. For example, in the mobile segment, “[t]he mobile applications processor is the primary chip in a smartphone, and runs the operating system and applications in addition to controlling many of the device functions, including gaming, music, video, and any other applications. While high compute performance is required for today’s applications, processors also must be highly energy efficient so that the smartphone’s battery will last all day without needing to be recharged.”²⁸ Mobile applications processors are expected to handle even more processing capabilities with the increase in “high-performance processing capabilities, including the shift to 5G, growth in mobile gaming, and emergence of AI and ML workloads.”²⁹

22. CPUs are also widely used in consumer electronics, which include “products found in the home, such as digital TVs, tablets, laptops, [and] extended reality (‘XR’) headsets and wearables.”³⁰

²⁴ <https://www.digitaltrends.com/computing/what-is-a-cpu/>.

²⁵ <https://www.techspot.com/article/1856-aiming-for-atoms-chip-manufacturing/>.

²⁶ <https://www.digitaltrends.com/computing/what-is-a-cpu/>.

²⁷ <https://www.intel.com/content/www/us/en/newsroom/resources/moores-law.html>.

²⁸ ARM_01259705 - 0105 at 9718.

²⁹ ARM_01259705 - 0105 at 9718.

³⁰ ARM_01259705 - 0105 at 9718.

23. CPUs are also used in the embedded segment or “Internet of Things” (“IoT”) where they are included in a “wide range of goods, including washing machines, thermostats, digital cameras, drones, sensors, surveillance cameras, manufacturing equipment, robotics, electronic motor controllers and city infrastructure and building management equipment.”³¹

24. The automotive market also uses CPUs for tasks such as “IVI [in-vehicle-infotainment], ADAS [Advanced Driver Assistance Systems], engine management, and body and chassis control.”³² CPUs in vehicles are “expected to increase as ADAS, electrification, IVI, and eventually autonomous driving, accelerate requirements for higher compute performance in newly manufactured vehicles.”³³

25. Within the networking equipment segment, CPUs are “deployed into wireless networking such as base-station equipment, enterprise Wi-Fi, and wired networking equipment such as routers and switches. The market is growing as more wired and wireless infrastructure is deployed, as much of the data consumed in the cloud is created at the edge and needs to be transmitted over networks to the data center for processing.”³⁴

26. CPUs in the cloud compute, data center, and server segment are used in “the main server chips, data processing units (DPUs), and smart network interface cards (SmartNICs) used by [cloud service providers] to run their operations. The increase in cloud computing has been driven by the rapid increase in data traffic generated by consumers and enterprises globally and by the migration of enterprise workloads to the cloud.”³⁵ Server CPUs “serve[] as a crucial component responsible for processing instructions and commands within a server. Its role

³¹ ARM_01259705 – 0105 at 9718.

³² ARM_01259705 – 0105 at 9719.

³³ ARM_01259705 – 0105 at 9719.

³⁴ ARM_01259705 – 0105 at 9719.

³⁵ ARM_01259705 – 0105 at 9719.

encompasses tasks such as retrieving and executing instructions, processing data, and undertaking various computational functions like serving web pages and executing database queries. As the linchpin of server functionality, the CPU plays a pivotal role in determining the computing capabilities of servers. The responsiveness and overall performance of a server are heavily influenced by the efficiency of its CPU.³⁶ It is my understanding that a server CPU works in four basic steps:³⁷

- Fetch: “The CPU retrieves instructions from memory, interprets them, and determines the next operation to be performed.”
- Decode: “All instructions or commands undergo translation into assembly instructions. During this stage, the server CPU decodes the assembly code, converting it into understandable binary instructions.”
- Execute: “The CPU carries out instructions using calculations and technical algorithms, producing processed data as output.”
- Store: “Following the execution of instructions, the CPU stores the output data back into the memory. This sequence of operations forms the core functioning of a server CPU, enabling it to process and manage data effectively.”

27. The performance of server CPUs can be measured based on the number of cores, number of threads, and clock speed.³⁸ I understand that server processors differ from personal computer processors.³⁹ Server processors are built to withstand ample amounts of data and serve multiple users, requiring highly reliable components with enterprise-grade cache requirements.⁴⁰

³⁶ <https://community.fs.com/article/what-is-a-server-cpu.html>.

³⁷ <https://community.fs.com/article/what-is-a-server-cpu.html>.

³⁸ <https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>.

³⁹ <https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>.

⁴⁰ <https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>.

B. Arm

28. Arm is described as “the industry leader of CPUs” that is relied on by “the world’s leading semiconductor companies and OEMs.”⁴¹ Arm is also known as “[t]he global leader in the development of licensable compute technology.⁴² Arm was established in 1990, was first publicly listed on the NASDAQ in 1998, and is headquartered in the United Kingdom.⁴³ Since its founding, Arm has spent decades developing “the most pervasive CPU architecture in the world,” which includes not only CPU products but also a “portfolio of products that are deployed alongside [its] CPUs,” such as graphics processing units (“GPUs”), system IP, compute platform products, as well as development tools and software.⁴⁴ Arm has invested significantly in developing its architectures and accompanying verification suites over more than 30 years as it has developed an ecosystem benefiting all Arm-compatible chips.⁴⁵ Arm continues to develop newer and more improved offerings backed by its intellectual property portfolio, and is currently on version 9 (“Arm v9”) as the next generation of Arm architecture offerings.⁴⁶

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

⁴¹ ARM_01259705 – 0105 at 9712.

⁴² ARM_01427450 – 492 at 451.

⁴³ ARM_01259705 – 0105 at 9713 – 9714.

⁴⁴ ARM_01259705 – 0105 at 9716.

⁴⁵ Deposition of Simon Segars, November 16, 2023, p. 47.

⁴⁶ <https://www.arm.com/architecture/cpu>.

⁴⁷ Deposition of Will Abbey, October 27, 2023, p. 168.

[REDACTED]

[REDACTED] *see also* Deposition of Paul Williamson, November 9, 2023, pp. 300 – 301 and 304 – 305.

⁴⁸ ARM_01259705 – 0105 at 9718.

⁴⁹ ARM_01259705 – 0105 at 9713.

29. Arm partners with companies of varying size.⁵⁰ With “thousands of partners, [Arm’s] customers can go to market faster with [] products that customers demand.”^{51,52} Companies such as Indie Semiconductor, Phoenix Technologies, MediaTek, Maven Silicon, and many others participate in Arm’s partnership program.⁵³ Arm’s licensees and partners comprise thousands of companies throughout the supply chain for semiconductor products, including the following:^{54,55}

- **Design Companies (or “fabless”)**—These are companies that design CPUs and SoCs but do not operate manufacturing facilities and instead outsource the manufacturing of CPUs and SoCs. Examples of Arm licensees include Qualcomm, Nordic Semi, and MediaTek.
- **Fabrication Companies (or “fabs” or “foundries”)** —These are companies that manufacture CPUs and SoCs, and may manufacture chips for other companies based on their designs that are provided to them. Examples of Arm licensees include STMicroelectronics and Samsung.
- **End-User Device Manufacturers** – These are companies that manufacture and sell end-user devices (*e.g.*, mobile phones, personal computers) that incorporate CPUs and SoCs. Examples of Arm licensees include Apple and Lenovo.

30. In addition, Arm boasts the industry’s largest software ecosystem with over 15 million developers and 10 million apps supported by operating systems such as Android, iOS, Linux, and Windows, among others.⁵⁶

31. Arm’s technology has been widely adopted. As of December of 2022, Arm’s share across applicable industries was approximately 48.9% (equaling \$98.9 billion in chip value based

⁵⁰ <https://www.arm.com/partners>.

⁵¹ <https://www.arm.com/partners>.

⁵² According to Ms. Tran, Arm’s use of “partnerships” (or “partners”) is synonymous with “licensing relationships.” (see Deposition of Christine Tran, December 19, 2023, p. 6 (rough transcript))

⁵³ <https://www.arm.com/partners>; ARM_01259705 - 0105 at 9720.

⁵⁴ <https://www.arm.com/partners>; ARM_01259705 - 0105 at 9720; Deposition of Paul Williamson, November 9, 2023, p. 279; Discussions with Paul Williamson.

⁵⁵ Certain of the example licensees identified have capabilities of more than one category (*i.e.*, Samsung).

⁵⁶ ARM_01427450 - 492 at 458.

on Arm chips).⁵⁷ Noted in its 2nd Amended 2023 F-1, Arm concludes, [REDACTED]

[REDACTED] 58

32. As of 2022, more than 230 billion chips have been shipped that were based on Arm's technology.⁵⁹ In addition, more than 70% of the world's population uses Arm processor technology.⁶⁰

33. Arm's has a strong presence in mobile applications processors.⁶¹ Since 2016, Arm has sought to "further develop and market [its] products to build on [its] success in powering the world's smartphones and other consumer electronic devices."⁶² Specifically, Arm has "focused in recent years on making Arm the ubiquitous provider of compute technology in all market segments by expanding into new markets, including cloud computing, networking, automotive, and IoT, most of which have strong secular tailwinds."⁶³ However, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] they also offer incredibly fast response time and excel at tackling complex workloads through multithreading."⁶⁵ Indeed, a May 2021 IBS semiconductor industry report indicated Intel's share in the data center CPU market is significant with AMD seeking to increase its share.⁶⁶ In addition,

⁵⁷ ARM_01259705 – 0105 at 9713.

⁵⁸ ARM_01259705 – 0105 at 9718.

⁵⁹ ARM_01427450 – 492 at 451.

⁶⁰ ARM_01427450 – 492 at 452.

⁶¹ ARM_01259705 – 0105 at 9718.

⁶² ARM_01259705 – 0105 at 9714.

⁶³ ARM_01259705 – 0105 at 9714.

⁶⁴ Discussions with Will Abbey.

⁶⁵ <https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>.

⁶⁶ ARM_00088045 – 303 at 070, 074, 127, and 129; *see also* Deposition of Tim Herbert, October 25, 2023, p. 29.

Arm has noted that:



34. Arm states that “[r]esearch and development is at the heart of [its] business and critical to [its] future success. Accordingly, [REDACTED]

[REDACTED] [Arm’s] vision to invest and develop new products is driven by [its] desire to maintain or increase [its] market share and create value for [its] customers.”⁶⁸ As part of its R&D efforts, Arm had approximately 6,000 individuals employed globally as of March 31, 2023, with approximately 80% of their workforce focused on research and development efforts in the previously stated markets.⁶⁹ Because of its R&D investments, as of March 31, 2023, Arm had over 6,800 U.S. and foreign patents, and 2,700 patent applications pending worldwide.⁷⁰

35. Arm’s business model is built on its licensing ecosystem.⁷¹ Arm offers two main types of licenses: Technology License Agreements (“TLAs”) and Architecture License Agreements (“ALAs”).⁷² In general, Arm provides access to its intellectual property, [REDACTED]

[REDACTED] that can be used to create files used to actually make CPUs and other components.⁷³ In return, [REDACTED], which can differ

⁶⁷ ARM_00088656 – 684 at 667; See also QCARM_3314892 – 915 at 899.

⁶⁸ ARM_01259705 – 0105 at 9804.

⁶⁹ ARM_01259705 – 0105 at 9713.

⁷⁰ ARM_01259705 – 0105 at 9721.

⁷¹ Discussions with Will Abbey and Christine Tran.

⁷² Discussions with Will Abbey and Christine Tran.

⁷³ See, e.g., QCARM_2426822 – 836; Discussions with Will Abbey and Christine Tran.

based on the [REDACTED] under the licensees' agreement(s).⁷⁴

36. The vast majority of Arm's licenses are TLAs, and historically most Arm customers have a TLA.⁷⁵ A TLA provides a [REDACTED]

[REDACTED].⁷⁶ In a TLA, the "Arm Technology" is a selection of Arm "products" including [REDACTED]

[REDACTED].⁷⁷ The licensee [REDACTED]

[REDACTED]

[REDACTED].⁷⁸ In exchange, the TLA licensee [REDACTED] to Arm.⁷⁹ The

[REDACTED]

[REDACTED]⁸⁰ In addition to [REDACTED] Arm

also receives [REDACTED]

[REDACTED] 81

37. An ALA from Arm, in contrast to a TLA, [REDACTED]

[REDACTED]

[REDACTED]⁸² In contrast to a TLA, [REDACTED]

[REDACTED] under the ALA; rather, the [REDACTED] to

⁷⁴ See, e.g., QCARM_2426822 – 836 at 828; see also Deposition of Will Abbey, October 27, 2023, p. 168.

⁷⁵ ARM_01259705 – 0105 at 9794; Deposition of Simon Segars, November 16, 2023, pp. 29 – 30.

⁷⁶ See, e.g., QCARM_2426822 – 836 at 822 – 826; Discussions with Will Abbey and Christine Tran.

⁷⁷ Discussions with Christine Tran.

⁷⁸ Discussions with Christine Tran.

⁷⁹ ARM_01259705 – 0105 at 9833.

⁸⁰ ARM_01259705 – 0105 at 9833.

⁸¹ ARM_01259705 – 0105 at 9793.

⁸² See, e.g., ARM_00111064 – 080 at 064 – 070; Discussions with Christine Tran; Deposition of Christine Tran, December 19, 2023, p. 66 (rough transcript)

[REDACTED] – each of [REDACTED]
which is based on [REDACTED]

Arm has granted fewer ALAs than TLAs.⁸⁴ Arm also provides [REDACTED]

[REDACTED]⁸⁵ For an ALA, the [REDACTED]

Arm ALA licensees also may have an Arm TLA.⁸⁷ Because CPU optimization is costly and time consuming, ALA licensees [REDACTED] and then [REDACTED]

38. Arm has built and continues to build a strong relationship with its partners through investment in Arm's licensing ecosystem, including TLAs and ALAs and, in turn, has developed a long-term recurring revenue stream that is reinvested in research and development to continue to improve and optimize Arm's technology.⁸⁹

39. As a company focused on licensing its intellectual property, Arm considers it to be critical to safeguard ARM Technology and Arm Confidential Information.⁹⁰ As Mr. Abbey (Arm's Executive Vice President & Chief Commercial Officer) testified during his deposition: "At the end of the day, Arm's an IP company. Our confidential information, our intellectual property is so germane to what we do. [REDACTED]

⁸³ Discussions with Christine Tran.

⁸⁴ Deposition of Tim Herbert, October 25, 2023, p. 55; Discussions with Will Abbey and Christine Tran.

⁸⁵ See, e.g., ARM_00111064 - 080 at 064 and 073 - 074; Discussions with Will Abbey and Christine Tran.

⁸⁶ ARM_01259705 - 0105 at 9834.

⁸⁷ Deposition of Will Abbey, October 27, 2023, p. 91.

⁸⁸ ARM_01259705 - 0105 at 9793.

⁸⁹ Discussions with Will Abbey and Paul Williamson.

⁹⁰ Deposition of Will Abbey October 27, 2023, p. 352; see also Deposition of Paul Williamson, November 9, 2023, pp. 238 and 243 - 244.

[REDACTED] Mr. Abbey also testified that [REDACTED]

[REDACTED]

[REDACTED]⁹² Mr. Williamson testified that "[REDACTED]"

[REDACTED]

[REDACTED]

[REDACTED]⁹³ Similarly, Mr. Williamson testified that [REDACTED]

[REDACTED]

"⁹⁴

40. Arm implements license provisions in order to protect its intellectual property (including Arm Technology and Arm Confidential Information) and licensing ecosystem, and relies on those provisions to ensure that it can continue to invest in research and development and to support its partners.⁹⁵ For example, Arm requires that a party have a license when it does any development work using Arm's intellectual property and that the scope and terms of the license are defined in advance.⁹⁶ Arm's TLAs and ALAs [REDACTED]

[REDACTED]

[REDACTED]

⁹⁷

41. For example, Arm's TLAs and ALAs [REDACTED]

[REDACTED]

⁹¹ Deposition of Will Abbey, October 27, 2023, p. 324.

⁹² Deposition of Will Abbey, October 27, 2023, p. 361.

⁹³ Deposition of Paul Williamson, November 9, 2023, p. 246.

⁹⁴ Deposition of Paul Williamson, November 9, 2023, p. 246.

⁹⁵ Discussions with Paul Williamson and Christine Tran.

⁹⁶ Discussions with Paul Williamson and Christine Tran.

⁹⁷ Discussions with Paul Williamson and Christine Tran.

[REDACTED]⁹⁸ For example, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

42. Arm's TLAs and ALAs also include [REDACTED]

[REDACTED] Those [REDACTED] require that Arm licensees [REDACTED]

[REDACTED].¹⁰¹ For example, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

43. These protections are critical to Arm's business.¹⁰³ If Arm could not enforce the protections included in its TLAs and ALAs, then licensees could misuse Arm's intellectual

⁹⁸ Discussions with Paul Williamson and Christine Tran.

⁹⁹ ARM_00111064 - 080 at 078.

¹⁰⁰ Discussions with Paul Williamson and Christine Tran.

¹⁰¹ Discussions with Paul Williamson and Christine Tran.

¹⁰² ARM_00111064 - 080 at 077.

¹⁰³ Discussions with Paul Williamson and Christine Tran.

property and the damage to Arm's intellectual property and licensing ecosystem would be significant.¹⁰⁴

C. Qualcomm

44. Qualcomm is one of the world's largest semiconductor companies, developing products directed to wireless communications, networking, personal computers, cell phones, automobiles, and other high-tech electronic devices.¹⁰⁵ Qualcomm's primary focus is on the mobile market, where it markets and develops its [REDACTED] CPU products on a worldwide scale.¹⁰⁶ Qualcomm is one of Arm's largest partners, accounting for approximately 11% of Arm's annual revenue.¹⁰⁷ Qualcomm has an ALA and TLA with Arm.¹⁰⁸ Arm and Qualcomm executed the first TLA in September 1997 and first ALA in September 2003.¹⁰⁹ I understand that prior to acquiring Nuvia (discussed below), [REDACTED]

45. Qualcomm, via QCT (“Qualcomm CDMA Technologies”), “utilizes a fabless production model, which means that [it] do[es] not own or operate foundries for the production of silicon wafers from which [its] integrated circuits are made.”¹¹¹ Qualcomm’s reliance on third-party licensing and manufacturing contracts negates the need for procurement of raw materials.¹¹² This segment holds significant importance to Qualcomm as “[d]ie cut from silicon

¹⁰⁴ Discussions with Will Abbey and Paul Williamson.

¹⁰⁵ <https://www.investopedia.com/articles/markets/012216/worlds-top-10-semiconductor-companies-1026340>; <https://www.tsmc.com/en-us/products>; <https://www.qualcomm.com/products>.

¹⁰⁶ <https://www.qualcomm.com/snapdragon/overview>; Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 31; Deposition of Ramakrishna Chunduru, October 30, 2023, p. 40.

¹⁰⁷ ARM_01259705 – 0105 at 9754.

¹⁰⁸ ARM_00060458 – 512; ARM_00044650 – 692.

¹⁰⁹ ARM_00095370 - 449 at 370.

¹¹⁰ Deposition of James Thompson, November 11, 2023, pp. 53 – 56.

¹¹¹ <https://investor.qualcomm.com/segments/qct>; Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 11.

¹¹² Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, pp. 4 and 11 - 12.

wafers are the essential components of all of [its] integrated circuits and a significant portion of the total integrated circuit cost.”¹¹³ The primary foundry suppliers for QCT include Samsung Electronics, Semiconductor Manufacturing International Corporation, and TSMC and generally take place in the Asia-Pacific region.¹¹⁴

46. In addition to licensing intellectual property (*e.g.*, from Arm), Qualcomm also has a licensing entity referred to as QTL (“Qualcomm Technology Licensing”).¹¹⁵ QTL grants licenses or otherwise provides rights to use portions of Qualcomm’s intellectual property portfolio, which includes certain patent rights essential to and/or useful in the manufacture and sale of certain wireless products.¹¹⁶ A significant portion of QTL’s licensing revenues are derived from agreements and grants under Qualcomm’s cellular standard-essential patents.¹¹⁷

D. Nuvia and the Nuvia ALA

47. Nuvia was a semiconductor company founded in early 2019 by three former Apple engineers: Gerard Williams III, Manu Gulati, and John Bruno.¹¹⁸ Nuvia was formed with the aim of developing energy-efficient server CPUs based on Arm architecture for use in data centers.¹¹⁹

48. In September 2019, Nuvia executed an ALA with Arm as well as a TLA (“Nuvia TLA”).¹²⁰ The Nuvia ALA included [REDACTED]

[REDACTED]:¹²¹

¹¹³ Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 12.

¹¹⁴ Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 12.

¹¹⁵ Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 7.

¹¹⁶ Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 7.

¹¹⁷ Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023, p. 12.

¹¹⁸ NuVia, Inc., Private Company Profile, *S&P Capital IQ*.

¹¹⁹ QCARM_3314892 - 915 at 893;

<https://web.archive.org/web/20210115193713/https://nuviainc.com/>; *see also* Deposition of Tim Herbert, October 25, 2023, pp. 28 and 31; Deposition of Richard Grisenthwaite, November 15, 2023, p. 62; Deposition of Nitin Sharma, October 27, 2023, p. 38.

¹²⁰ ARM_00111064 - 090 at 064; QCARM_2426822 - 836.

¹²¹ Discussions with Christine Tran.

50. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

¹²² ARM_00111064 - 080 at 064.

¹²³ ARM_00111064 - 080 at 064.

¹²⁴ ARM_00111064 - 080 at 064.

¹²⁵ See, e.g., ARM_00111064 - 080 at 078; Discussions with Will Abbey and Christine Tran.

¹²⁶ ARM_00111064 - 060 at 078.

51.

52. I understand that Nuvia worked from 2019 through early 2021 to develop a custom
processor core for the server market based on Arm architecture.¹³¹ Arm provided significant
expertise to Nuvia during its development of an Arm-based core for the server market.¹³² In
September 2020, Nuvia (in collaboration with Arm) had appeared to succeed, and announced its

¹²⁷ See, e.g., ARM_00111064 - 080 at 077; Discussions with Christine Tran

¹²⁸ See, e.g., ARM 00111064 - 080 at 077; Discussions with Christine Tran.

¹²⁹ ARM 00111064 - 080 at 077.

¹³⁰ ARM 00111064 - 080 at 077.

<https://www.qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia>

¹³² Deposition of Richard Grisenthwaite, November 15, 2023, pp. 77 - 78.

¹³³ <https://medium.com/silicon>

<https://medium.com/silicon-reimagined/performance-delivered-a-new-way-of-looking-at-283d5>

53. Nuvia had its initial round of Series A funding in November of 2019 that raised \$53 million.¹³⁵ Dell Technologies Capital, among other investment groups, were involved in the round of funding.¹³⁶ Nuvia based cores, developed with support from Arm, had begun to gain significant traction throughout the industry.¹³⁷ In September 2020, Nuvia raised \$240 million in Series B funding with plans to “deliver industry leading CPU performance to the data center.”¹³⁸

E. Qualcomm’s Acquisition of Nuvia and Continued Development of Nuvia-based Cores

54. On January 27, 2021, Qualcomm notified Arm that Qualcomm had “entered into a definitive agreement to acquire NUVIA Inc.”¹³⁹ Qualcomm acknowledged that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

140

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ¹⁴¹ Qualcomm asked for a response in one week, on February 3, 2021, “given the pace of the acquisition,” and “apologize[d] for the short fuse on th[e] request.”¹⁴²

¹³⁵ <https://web.archive.org/web/20210422062904/https://nuviainc.com/nuvia-raises-53-million-to-reimagine-silicon-design-for-the-data-center/>.

¹³⁶ <https://web.archive.org/web/20210422062904/https://nuviainc.com/nuvia-raises-53-million-to-reimagine-silicon-design-for-the-data-center/>.

¹³⁷ Deposition of Richard Grisenthwaite, November 15, 2023, pp. 77 – 78; QCARM_0584334 – 345 at 336.

¹³⁸ <https://web.archive.org/web/20210316180114/https://nuviainc.com/>.

¹³⁹ ARM_00032601 – 602 at 602.

¹⁴⁰ ARM_00032601 – 602 at 602.

¹⁴¹ ARM_00032601 – 602 at 602.

¹⁴² ARM_00032601 – 602 at 602.

55. Arm responded to Qualcomm's January 27, 2021 letter on February 2, 2021, congratulating Qualcomm on the news of the acquisition and indicating that it would [REDACTED]

[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 145

56. Qualcomm responded on February 3, 2021.¹⁴⁶ [REDACTED]

[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 149

¹⁴³ ARM_00048483 – 484 at 484.

¹⁴⁴ ARM_00048483 – 484 at 484.

¹⁴⁵ ARM_00048483 – 484 at 484.

¹⁴⁶ ARM_00032623 – 625.

¹⁴⁷ ARM_00032623 – 625 at 624.

¹⁴⁸ ARM_00032623 – 625 at 624.

¹⁴⁹ ARM_00032623 – 625 at 624.

57. [REDACTED]

[REDACTED]

58. On March 15, 2021, Qualcomm completed the acquisition of Nuvia, and stated it would be transitioned into the QCT branch of the company.¹⁵¹ Nuvia was purchased for approximately \$1.3 billion.¹⁵² Qualcomm reported, "Qualcomm Technologies expects to integrate next generation CPUs across a wide portfolio of products, including powering flagship smartphones, laptops, and digital cockpits, as well as Advanced Driver Assistance Systems, extended reality, and infrastructure networking solutions."¹⁵³ The purchase price allocation included tangible assets, intangible assets, and liabilities.¹⁵⁴

59. For over a year, Arm and Qualcomm engaged in negotiations to try to resolve their dispute and reach an agreement regarding Qualcomm's ability to continue to develop Nuvia-based Cores.¹⁵⁵ I understand that those discussions did not ultimately result in an agreement.¹⁵⁶

60. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁰ ARM_00032605 – 606 at 606.

¹⁵¹ <https://www.qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia>.

¹⁵² Qualcomm Inc. Form 10-K for the fiscal year ended September 26, 2021, p. F-30.

¹⁵³ <https://www.qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia>.

¹⁵⁴ Qualcomm Inc. Form 10-K for the fiscal year ended September 26, 2021, p. F-30.

¹⁵⁵ See, e.g., ARM_01215343 – 544; ARM_01309668 – 669; ARM_00032604; ARM_01305515; ARM_00000003; ARM_00000019 – 021; ARM_00087288 – 289; ARM_01215409.

¹⁵⁶ Deposition of Simon Segars, November 16, 2023, p. 72; Deposition of Rene Haas, December 12, 2023, pp. 163 – 164.

¹⁵⁷ QCARM_0338883; QCARM_2429057.

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁸ QCARM_0338883.

¹⁵⁹ QCARM_0338883.

¹⁶⁰ QCARM_2426822 - 836 at 833.

¹⁶¹ QCARM_3337797; QCARM_0557206; QCARM_3059661.

¹⁶² QCARM_3434164.

¹⁶³ In addition, in April 2022, [REDACTED]

[REDACTED] (e.g., QCARM_3965325 - 326).

¹⁶⁴ ARM_01305479 - 480 at 480.

Figure 8:

165



63.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

64.

[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁶⁵ ARM_01305479 – 480 at 480.

¹⁶⁶ QCARM_2429057.

¹⁶⁷ QCARM_2429057.

¹⁶⁸ QCARM_3059661.

¹⁶⁹ ARM_01238999 – 9003; *see also* ARM_01215997 – 6001 at 997

QCARM_2417783

[REDACTED] In this report, I use "Nuvia-based Cores" to refer [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] I am informed and understand that [REDACTED]
[REDACTED] has been described as [REDACTED] and therefore would be a Nuvia-based Core.¹⁷² I understand that Defendants are developing other products that fit the definition of Nuvia-based Cores. [REDACTED].¹⁷³

65. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

¹⁷⁰ See, e.g., Arm Ltd.'s Second Supplemental Objections and Responses to Qualcomm's First Set of Interrogatories (Nos. 1 and 6), November 17, 2023, pp. 4, 11 – 12, and 43 – 46; Arm Ltd.'s Supplemental Objections and Responses to Qualcomm's Third Set of Interrogatories (No. 20), November 17, 2023, pp. 5 and 11 – 12.

¹⁷¹ Correspondence dated 10/26/2023, email from J. Braly to J. Li; Deposition of Mike Roberts, November 28, 2023, pp. 35 – 37.

¹⁷² <https://www.forbes.com/sites/jonmarkman/2023/12/05/qualcomms-x-elite-crushes-apple-arm-holdings-stocks-surge/?sh=5f330d9e7d04>; see also <https://www.pcmag.com/news/qualcomm-snapdragon-x-elite-oryon-chip-tests>.

¹⁷³ See, e.g., Deposition of Jignesh Trivedi, October 25, 2023, pp. 83 – 90 [REDACTED]; Deposition of Manu Gulati, October 12, 2023, pp. 63 – 64 [REDACTED] and 208 [REDACTED]; Deposition of Gerard Williams, November 11, 2023, pp. 243 – 245 [REDACTED], and 246 – 247 [REDACTED]

¹⁷⁴ ARM_01241187.

¹⁷⁵ ARM_01241187.

66. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

67. Notwithstanding Arm's correspondence with Qualcomm, Arm alleges [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED] For example, in June 2022, Qualcomm

said that its Nuvia chips will soon join the industry-wide "ecosystem transition to Arm" and that by "late next year, beginning 2024, you're going to see Windows PCs powered by Snapdragon

¹⁷⁶ ARM_01241187.

¹⁷⁷ ARM_00045393.

¹⁷⁸ ARM_00045393.

¹⁷⁹ Arm Ltd.'s Second Supplemental Objections and Responses to Qualcomm's First Set of Interrogatories (Nos. 1 - 11), November 17, 2023, pp. 27 - 28 *see Defendants' Answer and Defenses to Plaintiff's Complaint and Jury Demand and Defendants' Amended Counterclaim*, October 26, 2022, pp. 10 and 80.

with a Nuvia-designed CPU.”¹⁸⁰ Moreover, in November 2022, Qualcomm made clear that “the creation of our custom CPU was started by Nuvia engineers while employed at Nuvia.”¹⁸¹

68. Based on Qualcomm’s continued use of the Nuvia-based Cores (including the

[REDACTED]), Arm filed this litigation.¹⁸² Arm asserts that despite Nuvia’s and Qualcomm’s certifications, Defendants continued to use and develop Arm-based Technology developed under the Nuvia license agreements, including Nuvia-based Cores.¹⁸³

VII. DAMAGES INADEQUATE TO COMPENSATE FOR HARM

A. Summary

69. In my opinion, if Defendants are found liable for breach of the Nuvia ALA but are not ordered to discontinue the use and distribution of Arm Technology, Arm Confidential Information, and any products embodying such technology or information (including Nuvia-based Cores), then monetary damages are not adequate to compensate Arm for the harm (including future harm) caused by Defendants’ breach of the Nuvia ALA. In my opinion, the monetary damages associated with the harm to Arm (including future harm) caused by Defendants’ breach of the Nuvia ALA cannot be determined with reasonable certainty.

70. I have considered the harms that Defendants’ breach of the Nuvia ALA may cause to Arm, based on my discussions with Arm employees and review of the record, and described those harms below. As further described below, those harms to Arm include: (A) a significant disruption to Arm’s licensing ecosystem, (B) a significant negative impact on Arm’s first mover

¹⁸⁰ Complaint, August 31, 2022, p. 14 (citing *Qualcomm CEO on What He Really Thinks of Apple*, The Daily Charge (June 9, 2022), <https://podcasts.apple.com/us/podcast/qualcomm-ceo-on-what-he-really-thinks-of-apple/id1091374076?i=1000565773375>).

¹⁸¹ Mark Hachman, *Qualcomm dubs Nuvia CPU ‘Oryon,’ on track for 2023*, PCWorld (Nov. 17, 2022), <https://www.pcworld.com/article/1382740/qualcomm-dubs-nuvia-cpu-oryon-on-track-for-2023.html>.

¹⁸² Complaint, August 31, 2022.

¹⁸³ Complaint, August 31, 2022, pp. 13 – 15.

advantage, (C) harm to Arm's expansion into new segments and markets, (D) a significant decrease in licensing revenue and investment in research and development, and (E) a significant decrease in Arm's reputation and goodwill. Moreover, these harms are exacerbated by several additional factors. As set forth below, monetary damages cannot adequately compensate for any of these harms (individually or collectively). Further, the damages associated with these harms (individually and collectively) cannot be determined with reasonable certainty. I address these harms in turn below.

B. Significant Disruption to Arm's Licensing Ecosystem

71. The harm to Arm's licensing ecosystem resulting from Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained. The disruption to Arm's licensing ecosystem includes many different, but overlapping, harms which cannot be quantified. The uncertainty of those harms is further exacerbated by the unprecedented situation in which a licensee is being permitted to continue to use and distribute Arm Technology, Arm Confidential Information, and products embodying such technology or information despite it doing so in breach of its license agreement (assuming that Defendants are found to have breached the Nuvia ALA and not ordered to stop using and distributing Arm Technology, Arm Confidential Information, and products embodying such technology or information).

72. For example, Mr. Williamson testified concerning [REDACTED]

[REDACTED]
[REDACTED]"¹⁸⁴ Mr. Williamson further testified that Arm's damages are "inestimable,"¹⁸⁵ and that:

¹⁸⁴ Deposition of Paul Williamson, November 9, 2023, pp. 243 – 244.

¹⁸⁵ Deposition of Paul Williamson, November 9, 2023, p. 244.



73. Mr. Abbey also stated that Qualcomm [REDACTED]

[REDACTED]

[REDACTED] ¹⁸⁷ Further, Mr. Abbey testified that [REDACTED]

[REDACTED]

[REDACTED] ¹⁸⁸ Mr. Williamson testified that "ARM has a reputation of trust with its partners who build technology based on ARM's technology and services associated with it. Their success is a shared success business with ARM, and trust is an important element of that continuing business practice."¹⁸⁹ Similarly, Mr. Williamson testified that [REDACTED]

[REDACTED]

[REDACTED] ■ Mr. Haas testified that Arm is [REDACTED]

[REDACTED] and that if it "allow[s]" [REDACTED]

[REDACTED] ■

74. The harms to Arm's ecosystem may include the following: (i) existing and prospective Arm licensees could demand more favorable terms and lower royalties to account

¹⁸⁶ Deposition of Paul Williamson, November 9, 2023, pp. 244 - 245.

¹⁸⁷ Deposition of Will Abbey, October 27, 2023, p. 361.

¹⁸⁸ Deposition of Will Abbey, October 27, 2023, p. 361.

¹⁸⁹ Deposition of Paul Williamson, November 9, 2023, p. 246.

¹⁹⁰ Deposition of Paul Williamson, November 9, 2023, p. 246.

¹⁹¹ Deposition of Rene Haas, December 12, 2023, pp. 164 - 165.

for increased risk, (ii) existing and prospective licensees could exploit development and financial terms of other licensees in unexpected ways to compete against Arm's partners, (iii) Arm will not be able to rely on provisions in its existing and prospective licenses to protect its intellectual property, (iv) third parties and end users may shift to Nuvia-based Cores, and (v) existing and prospective licensees may shift away from Arm chips. This harm represents a significant threat to Arm's ability perpetuate its business model given its dependence on developing, licensing, and protecting its intellectual property.

i. Existing and Prospective Arm Licensees Could Demand More Favorable Terms and Lower Royalties to Account for Increased Risk

75. The harm of existing and prospective Arm licensees demanding more favorable license terms and lower royalties to account for increased risk associated with other licensees' misuse of Arm's intellectual property resulting from Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.¹⁹²

76. For example, current and prospective Arm licensees could consider the impact of Qualcomm or other licensees or prospective licensees breaching their license agreements, and misusing Arm Technology, Arm Confidential Information, and products embodying such technology or information.¹⁹³ This could have several impacts. For example, existing licensees may be less inclined to respect their license terms or selectively misinterpret terms which would require Arm to devote significant resources to negotiating and, potentially, enforcing those licenses.¹⁹⁴ The transaction costs associated with probable re-negotiations and other related

¹⁹² Discussions with Will Abbey and Paul Williamson.

¹⁹³ Discussions with Will Abbey and Paul Williamson.

¹⁹⁴ Discussions with Will Abbey and Paul Williamson.

effects could result in significant harm to Arm's licensing ecosystem.¹⁹⁵

77. In addition, existing and prospective licensees may seek reduced royalty rates or other concessions.¹⁹⁶ Given that [REDACTED]

[REDACTED]

[REDACTED] In addition, given the large

number of Arm existing and prospective licensees, even a minimal change in royalty rates into the future can result in additional significant harm to Arm's licensing ecosystem.¹⁹⁸

78. In my opinion, the scope of the harm of existing and prospective Arm licensees demanding more favorable terms and lower royalties to account for increased risk cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

ii. **Existing and Prospective Arm Licensees Could Exploit Development and Financial Terms of Other Licenses in Unexpected Ways to Compete Against Arm's Partners**

79. The harm of existing and prospective Arm licensees exploiting the technology developed under, and financial terms of, other Arm licensees in unexpected ways - including competing against Arm's partners -- as a result of Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.¹⁹⁹ In particular, if Qualcomm is permitted to continue to use Arm Technology, Arm Confidential

¹⁹⁵ Discussions with Will Abbey and Paul Williamson; Deposition of Will Abbey, October 27, 2023, p. 365 (Mr. Abbey testified regarding the amount of time related to negotiations.); Deposition of Simon Segars, November 16, 2023, p. 83 ("[REDACTED]"); Deposition of Tim

Herbert, October 25, 2023, p. 121 (Mr. Herbert testified [REDACTED] the Nuvia ALA)..

¹⁹⁶ Discussions with Will Abbey and Paul Williamson.

¹⁹⁷ Discussions with Will Abbey and Paul Williamson.

¹⁹⁸ Discussions with Will Abbey and Paul Williamson.

¹⁹⁹ Discussions with Will Abbey and Paul Williamson.

Information, and products embodying such technology or information (provided or developed under the Nuvia ALA), then other companies may follow this precedent and try to “free ride” on Arm’s licensing regime, causing a loss of control of Arm’s licensing ecosystem.²⁰⁰ In essence, Arm licenses become “tradeable commodities” between companies.²⁰¹ Such an occurrence may result in Arm being deprived of the opportunity to partner with new companies in industries and markets that have not yet emerged.²⁰²

80. Arm negotiates TLAs and ALAs with specific companies and includes many terms specific to those agreements.²⁰³ Arm considers many different factors when negotiating the terms of a specific TLA or ALA and ensures that any final agreements include protections for Arm’s intellectual property.²⁰⁴ In particular, Arm negotiates license agreements [REDACTED]

[REDACTED]
[REDACTED].²⁰⁵ Arm also negotiates [REDACTED]
[REDACTED].²⁰⁶ Arm does not intend or expect, and Arm licensees do not pay for, the right to acquire and use products developed by other licensees under other license agreements with other technical and financial terms (and that may have been negotiated with different downstream products in mind).²⁰⁷ In such a situation, the acquiring company taking a lower, unnegotiated for rate, would allow it to gain an unfair advantage over other Arm partners.²⁰⁸

81. Accordingly, if a licensee were permitted to “go around” these protections and acquire other licensees (*i.e.*, “free ride” on Arm’s ecosystem and partners’ development) knowing

²⁰⁰ Discussions with Will Abbey and Paul Williamson.

²⁰¹ Discussions with Paul Williamson.

²⁰² Discussions with Will Abbey and Paul Williamson.

²⁰³ Discussions with Paul Williamson and Christine Tran.

²⁰⁴ Discussions with Paul Williamson and Christine Tran.

²⁰⁵ Discussions with Paul Williamson and Christine Tran.

²⁰⁶ Discussions with Paul Williamson.

²⁰⁷ Discussions with Paul Williamson and Christine Tran.

²⁰⁸ Discussions with Will Abbey and Paul Williamson.

that it could use that other licensees' work and pay their own differently negotiated royalty rates, then the harm to Arm's ecosystem would be significant.²⁰⁹ Any Arm licensee could consider this an option and, accordingly, all of Arm's existing and prospective licenses would be at risk.²¹⁰

82. This risk is acute even considering only Arm's largest licensees. For example, [REDACTED]

[REDACTED]

[REDACTED]

But if Qualcomm were permitted to do so, then Arm's other major licensees (and potentially all licensees) would effectively consider themselves to have the same right - or at least the ability to do so based on Qualcomm's example and that Arm could not rely on the protections in its license agreements to prevent these actions.²¹² Arm's licensees would effectively be able to commandeer the development of all other Arm licensees, complete development, and then commercialize the other licensees' work under their own agreement - an agreement that does not give them such a right -- and with potentially lower royalty rates.²¹³

83. Mr. Abbey identified these risks in his deposition testimony stating that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ²¹⁴ Mr. Abbey further testified that [REDACTED]

[REDACTED]

[REDACTED]

²⁰⁹ Discussions with Will Abbey and Paul Williamson.

²¹⁰ Discussions with Will Abbey and Paul Williamson.

²¹¹ Discussions with Will Abbey and Paul Williamson.

²¹² Discussions with Will Abbey and Paul Williamson.

²¹³ Discussions with Will Abbey and Paul Williamson.

²¹⁴ Deposition of Will Abbey, October 27, 2023, p. 361.

[REDACTED].”²¹⁵

84. If Qualcomm could acquire Nuvia, repurpose Nuvia’s development work under the ALA for a different purpose, and then commercialize that work under Qualcomm’s own lower royalty rates, then Arm would effectively lose control of its intellectual property and licensing ecosystem.²¹⁶ Particularly given Qualcomm’s size and prominence as one of Arm’s largest partners by royalty revenue, there would be little to stop others from engaging in the same actions as Qualcomm knowing that Arm could not enforce the contractual provisions that protect Arm’s intellectual property.²¹⁷

85. In my opinion, the scope of the harm of existing and prospective Arm licensees exploiting development and financial terms of other licenses in unexpected ways to compete against Arm’s partners cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

iii. Arm Will Not Be Able to Rely on Partners Respecting Provisions in Its Existing and Prospective Licenses to Protect Its Intellectual Property

86. The harm to Arm’s ability to freely negotiate licensing terms with the expectation that those freely-negotiated licensing terms will be enforced resulting from Defendants’ breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.²¹⁸ This “chilling effect” of increased uncertainty may impact the number and types of licenses that Arm can enter into with existing or prospective partners.²¹⁹ Further, Arm will lose its control over its Arm Technology and Confidential Information, including the

²¹⁵ Deposition of Will Abbey, October 27, 2023, p. 362.

²¹⁶ Discussions with Will Abbey and Paul Williamson.

²¹⁷ Discussions with Will Abbey and Paul Williamson.

²¹⁸ Discussions with Will Abbey and Paul Williamson.

²¹⁹ Discussions with Will Abbey and Paul Williamson.

ability to determine which entities have access to such information.²²⁰

87. Mr. Abbey's testimony highlighted the importance of Arm's ability to maintain control of its intellectual property and confidential information. For example, Mr. Abbey stated that, [REDACTED]

[REDACTED] And as I said earlier, as an intellectual property, a company that focuses on intellectual property, it's really important that we safeguard and protect Arm's intellectual property."²²¹ Similarly, Mr. Abbey stated, "I think the fact that [REDACTED]

[REDACTED]."²²² Mr. Abbey also emphasized the importance of having the ability to "stand behind" Arm's contractual agreements. Specifically, Mr. Abbey stated that "as a person that spends a long time negotiating contracts that covers things like this,... we spend time meticulously reviewing these agreements and making sure these agreements are things that we can stand behind.²²³

88. In my opinion, the scope of the harm of Arm not being able to rely on partners and prospective partners respecting provisions in its existing and prospective licenses to protect Arm Technology and Confidential Information cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

iv. Third Parties and End Users May Shift to Nuvia-based Cores

89. The harm of third parties and end users shifting to Nuvia-based Cores and products incorporating Nuvia-based Cores as a result of Defendants' breach of the Nuvia ALA cannot be

²²⁰ Discussions with Will Abbey and Paul Williamson.

²²¹ Deposition of Will Abbey, October 27, 2023, p. 352.

²²² Deposition of Will Abbey, October 27, 2023, p. 360.

²²³ Deposition of Will Abbey, October 27, 2023, p. 365.

readily quantified and the associated monetary damages cannot be reasonably ascertained.²²⁴ The impetus for such a shift to these other chips would be that Qualcomm contends that Nuvia-based Cores would be sold and subject to the Qualcomm ALA rates which are lower than the Nuvia ALA rates.²²⁵ Accordingly, Qualcomm may be able to sell Nuvia-based Cores and products incorporating Nuvia-based Cores at a lower price point than it would cost an existing or prospective [REDACTED] TLA or ALA.²²⁶

90. Qualcomm has publicly touted the performance of the Nuvia-based Cores. Specifically, Qualcomm recently “invited reporters [] to a special benchmarking session for the” Snapdragon X Elite, which is “based on the Oryon processor.”²²⁷ At the benchmarking session, the “X Elite dunked on Apple, according to an account from a *WindowsCentral* reporter.”²²⁸ Qualcomm has stated that “nine Windows PC makers have signed on to build new machines based on the X Elite platform,” namely “Acer, ASUS, Dell [], Hewlett Packard, HONOR, Lenovo, Microsoft Surface, Samsung, and Xiaomi.”²²⁹ In addition, a May 2021 IBS semiconductor industry report noted that “[t]he acquisition of NUVIA...is expected to strengthen the competitive position of Qualcomm in the notebook computer market.”²³⁰

91. However, in tandem with the performance increases related to Nuvia-based Cores, Qualcomm intends to benefit from lower royalty rates to Arm ([REDACTED])

²²⁴ Discussions with Will Abbey and Paul Williamson.

²²⁵ Discussions with Will Abbey and Paul Williamson.

²²⁶ Discussions with Will Abbey and Paul Williamson.

²²⁷ <https://www.forbes.com/sites/jonmarkman/2023/12/05/qualcomms-x-elite-crushes-apple-arm-holdings-stocks-surge/?sh=5f330d9e7d04>; see also <https://www.pcmag.com/news/qualcomm-snapdragon-x-elite-oryon-chip-tests>.

²²⁸ <https://www.forbes.com/sites/jonmarkman/2023/12/05/qualcomms-x-elite-crushes-apple-arm-holdings-stocks-surge/?sh=5f330d9e7d04>.

²²⁹ <https://www.forbes.com/sites/jonmarkman/2023/12/05/qualcomms-x-elite-crushes-apple-arm-holdings-stocks-surge/?sh=5f330d9e7d04>.

²³⁰ ARM_00088045 – 303 at 219.

[REDACTED]). As previously discussed in this report, Qualcomm contends that its acquisition of Nuvia allows Qualcomm to avoid paying Arm royalty rates under its TLA or a renewed TLA for Arm's v9 CPUs. Indeed, this "cost savings" benefit has been analyzed by Qualcomm. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] As such, the cost savings arise from the benefit Qualcomm received by commandeering Nuvia's development under a different agreement – the Nuvia ALA.

92. The cost savings sought by Qualcomm due to lower royalty payments to Arm also could have a significant impact on Arm's financial performance. Arm's 2nd Amended F-1 highlighted the risk of this type of action (*i.e.*, major customer electing to develop via an ALA) stating, [REDACTED]

[REDACTED]

[REDACTED]

"²³⁵

93. In my opinion, the scope of the harm of third parties and end users shifting to Nuvia-based Cores and products incorporating Nuvia-based Cores cannot be readily determined

²³¹ Deposition of Paul Williamson, November 9, 2023, pp. 43 and 95.

²³² QCARM_3524599 - 500 at 599.

²³³ QCARM_3524599 - 500 at 599.

²³⁴ [REDACTED]

²³⁵ ARM_01259705 - 0105 at 9737.

or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

v. Existing and Prospective Licensees May Shift Away from Arm Chips

94. The harm associated with existing and prospective Arm licensees shifting away from Arm chips altogether as a result of Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.²³⁶ As discussed later in this report, if Arm's investments in research and development were to be impacted due to a decline in revenue, existing and prospective licensees may perceive Arm as not being an industry leader in performance and support.²³⁷ As a result, existing and prospective Arm licensees may seek alternatives to Arm-based and Arm-compatible products and move away from Arm chips.²³⁸

95. One potential alternative that existing and prospective licensees might consider is RISC-V. RISC-V is described as a different "instruction set architecture," that is open-source.²³⁹ Arm has stated that "[m]any of [its] customers are [] major supporters of the RISC-V architecture and related technologies. If RISC-V-related technology continues to be developed and market support for RISC-V increases, [Arm's] customers may choose to utilize this free, open-source architecture instead of [its] products."²⁴⁰ While RISC-V has been recognized as a competitive threat, "[t]he general consensus is that, right now, RISC-V doesn't pose a major threat to Arm. That's because the technology is currently far inferior to Arm's offering."²⁴¹ The threat of RISC-V is considered to be low because RISC-V is immature compared to Arm and "doesn't have the

²³⁶ Discussions with Will Abbey and Paul Williamson.

²³⁷ Discussions with Will Abbey and Paul Williamson.

²³⁸ Discussions with Will Abbey and Paul Williamson.

²³⁹ <https://www.cnbc.com/2022/09/01/why-arms-lawsuit-against-qualcomm-is-a-big-deal.html>.

²⁴⁰ ARM_01259705 – 0105 at 9733.

²⁴¹ <https://www.cnbc.com/2023/09/14/arm-ipo-what-is-risc-v-and-why-does-arm-call-the-rival-product-a-risk.html>.

same level of support.”²⁴² RISC-V does not have the type of ecosystem that has been developed by Arm.²⁴³ However, the risk of competition from RISC-V may increase as a result of Qualcomm’s and Nuvia’s alleged actions.²⁴⁴

96. The uncertainty introduced by Qualcomm’s and Nuvia’s alleged actions could result in promotion or increased adoption of RISC-V or x86 despite the perceived current lack of support for the alternative. Such a development could have long-term, unforeseen consequences on Arm’s licensing ecosystem.

97. In my opinion, the scope of the harm of existing and prospective Arm licensees shifting away from Arm chips cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

vi. Licensing Ecosystem Summary

98. In my opinion, the scope of the harm to Arm’s licensing ecosystem caused by Defendants’ breach of the ALA cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

99. The harms to Arm’s licensing ecosystem are substantial and pose a significant threat to Arm’s business. The reason for this is that Arm’s business revolves around its licensing of Arm Technology and Arm Confidential Information and if Defendants can breach the Nuvia ALA and continue to use Arm Technology and Arm Confidential Information provided under

²⁴² <https://www.cnbc.com/2023/09/14/arm-ipo-what-is-risc-v-and-why-does-arm-call-the-rival-product-a-risk.html>.

²⁴³ <https://www.cnbc.com/2023/09/14/arm-ipo-what-is-risc-v-and-why-does-arm-call-the-rival-product-a-risk.html>.

²⁴⁴ Discussions with Will Abbey and Paul Williamson.

the Nuvia ALA, and products embodying such technology and information (including the Nuvia-based Cores), then Arm's entire business may be substantially undermined.

C. Significant Negative Impact on Arm's First Mover Advantage

100. The harm to Arm's first mover advantage resulting from Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.²⁴⁵ Arm's loss of first mover advantage could cause significant detrimental effects, including a loss of ecosystem benefits and the ability of Arm to establish a foothold in emerging markets as potential licensees seek alternatives to Arm-based technology.²⁴⁶

101. Due to its early innovation, Arm has established a meaningful presence in the market. As described in its 2nd Amended F-1, Arm states that it has "enjoyed success for more than 30 years by providing market-leading technology, adapting [its] solution to changing market needs and building a software developer ecosystem unlike any other in history."²⁴⁷ In describing its formation, Arm states that:

The original joint venture set out to develop a processor that was high performance, power efficient, easy to program, and readily scalable—a goal that continues to define Arm today. Our CPUs initially gained significant traction in mobile phones in the mid-1990s because our energy-efficient processors provided an appropriate level of performance while consuming little power, which was critical for these smaller form factor devices. Over time, mobile phones, and the chips they used, became more advanced and ultimately evolved into the smartphones that are prevalent today. The Arm CPU proved to be critical in enabling the smartphone revolution.²⁴⁸

102. Arm's innovation in the mobile phone revolution has been significant. Namely, "[w]ith the help of Arm technology, many more devices such as televisions, watches, washing

²⁴⁵ Discussions with Will Abbey and Paul Williamson.

²⁴⁶ Discussions with Will Abbey and Paul Williamson.

²⁴⁷ ARM_01259705 – 0105 at 9720.

²⁴⁸ ARM_01259705 – 0105 at 9714.

machines, cameras, factory equipment, and others are undergoing the same revolution.”²⁴⁹ Indeed, Arm’s CPU architecture “has resulted in the proliferation and evolution of computers as people know them today. [By enabling] the mobile phone and smartphone revolution, and through [its] focus on energy efficiency and [its] history of continuous innovation, [Arm has] enabled new categories of ‘smart’ consumer electronics.”²⁵⁰ In fact, “in the fiscal year ended March 31, 2023, more than 260 companies reported that they had shipped Arm-based chips, and [] approximately 70% of the world’s population uses Arm-based products.”²⁵¹ In addition, “[t]he scale of [Arm’s] reach continues to expand, with more than 30 billion Arm-based chips reported as shipped in the fiscal year ended March 31, 2023 alone, representing an approximately 70% increase since the fiscal year ended March 31, 2016.”²⁵² As evidence of Arm’s long standing impact on the CPU industry, Arm reports that “based on royalty revenue information provided to us by customers in quarterly royalty reports, approximately 46% of our royalty revenue for the fiscal year ended March 31, 2023 came from products released between 1990 to 2012.”²⁵³

103. Based on its existing ecosystem in markets such as mobile phones and smartphones, Arm has indicated that it intends to expand its presence in new markets. For example, statements in its 2nd Amended F-1 express Arm’s intentions to grow its presence, as highlighted below.

- “We have long-standing, significant market share in high-value markets, such as mobile applications processors, which enables us to invest in other growth opportunities. Our long-term growth strategy includes expanding our market share in growth markets, including cloud compute, networking equipment, automotive, and consumer electronics. We believe that the increasing need for high-powered and energy-efficient computing, as well as our continued investments, will enable us to grow our share in these segments.”²⁵⁴

²⁴⁹ ARM_01259705 – 0105 at 9714.

²⁵⁰ ARM_01259705 – 0105 at 9792.

²⁵¹ ARM_01259705 – 0105 at 9792.

²⁵² ARM_01259705 – 0105 at 9792.

²⁵³ ARM_01259705 – 0105 at 9794.

²⁵⁴ ARM_01259705 – 0105 at 9792 – 793.

- “Arm CPUs are the world’s most widely licensed and deployed processors. Our products are used in almost all smartphones, the majority of tablets and digital TVs, and a significant proportion of all chips with embedded processors, including for both consumer and enterprise applications. For the fiscal year ended December 31, 2022, we had a greater than 99% share of the smartphones market and a very high share in a range of other electronic devices, from digital TVs to drones. As new high-growth markets for electronics emerge and incorporate more AI and ML workloads, they require our more advanced processor designs in areas such as cloud computing the automotive industry, and it IoT economy. Our operating and financial performance is dependent, in large part, upon maintaining our market share in the smartphone and consumer electronics markets and maintaining or growing market share in our other target markets.”²⁵⁵
- “For established markets where there is an incumbent architecture with a supporting ecosystem, it can be difficult for a new architecture to displace existing architectures and, therefore, to gain market share. For example, we have made significant progress and have established a large market share in markets such as smartphones, consumer electronics, and IoT. We face competition primarily from other architectures like x86 and RISC-V in many of these markets. Furthermore, certain semiconductor companies, including some of our existing customers, have designed or are in the process of designing their own architectures in markets such as smartphone application processors, other mobile chips, consumer electronics, IoT and embedded computing, networking equipment, automotive, and cloud compute.”²⁵⁶

104. As previously discussed in this report, Arm partners with companies of varying size.²⁵⁷ With “thousands of partners, [Arm’s] customers can go to market faster with [] products that customers demand.”²⁵⁸ [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] ²⁵⁹ Mr. Segars testified that “through Arm’s history, we built an extensive partnership of third-parties who provide things that Arm

²⁵⁵ ARM_01259705 – 0105 at 9795.

²⁵⁶ ARM_01259705 – 0105 at 9838.

²⁵⁷ <https://www.arm.com/partners>.

²⁵⁸ <https://www.arm.com/partners>.

²⁵⁹ Deposition of Paul Williamson, November 9, 2023, pp. 279 – 281.

doesn't, which makes it easier to support a—to use an ARM microprocessor. There is a large amount of software in the world that is written to run on Arm, and an ARM-compatible processor can run all of that code. So it enables people to get a product to market much more quickly than building their own or using an alternative and at lower cost.”²⁶⁰ Mr. Herbert similarly testified of the software ecosystem as follows: “It is the collection of software that has been developed by different companies that would allow someone that was building an Arm server the ability to develop it and drop it in and it would work.”²⁶¹

105. By acquiring Nuvia, Qualcomm gained an advantage by way of an accelerated path to developing its own CPUs, which will come at the expense of Arm's other licensees. As part of the rationale for acquiring Nuvia, Qualcomm stated [REDACTED]

The image consists of five horizontal black rectangular bars of different widths, arranged vertically. The top bar is the shortest, followed by a medium-length bar, then a long bar, another medium-length bar, and finally a very long bar at the bottom. Each bar has a small white square at its left end.

²⁶⁰ Deposition of Simon Segars, November 16, 2023, p. 32.

²⁶¹ Deposition of Tim Herbert, October 25, 2023, pp. 90 – 91.

²⁶² QCARM_7467691 - 692 at 692.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ■ Ultimately, via its acquisition of Nuvia,

Qualcomm has shortened the time it would have needed to build its own CPU development team as well as the development time itself.

106. As described above, Arm has developed a significant presence—particularly in the mobile segment, which has led to the development of an extensive partner ecosystem. Arm's vast ecosystem also serves to buttress Arm's established presence given the benefits afforded to Arm's

[REDACTED]
■
[REDACTED]

partners and end users. Through its actions, Qualcomm appears intent on leveraging Arm's presence in the market and ecosystem to replace CPUs developed under Arm TLAs with Nuvia-based Cores. As discussed previously in this report, a harm that may result to Arm is third parties and end users shifting to Nuvia-based Cores. By foregoing its own development efforts (and related costs), Qualcomm appears poised to use the Nuvia-based Cores at the direct expense of Arm and its established first mover advantage. This advantage may not have been realized under Qualcomm's own ALA, given that Qualcomm had failed to create its own products under that agreement.²⁶⁸ In addition to losing the benefit of its first mover advantage in the mobile segment, Qualcomm's actions also jeopardize Arm's ability to use this advantage to enter and grow its presence in emerging markets. [REDACTED]

[REDACTED]

[REDACTED] Here again, as with the mobile segment, Qualcomm intends to benefit from foregoing its own development efforts (and related costs) to use Nuvia-based Cores to the detriment of Arm's own decades-long efforts. With fewer licensees, Arm's ability to broaden into emerging markets will be impacted.

107. In my opinion, the scope of the harm of the significant negative impact on Arm's first mover advantage cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

D. Arm's Expansion into New Segments and Markets Will Be Undermined

108. The harm to Arm's expansion into new segments and markets resulting from

²⁶⁸ Deposition of Richard Grisenthwaite, November 15, 2023, p. 218.

²⁶⁹ QCARM_3524599 - 500 at 599.

Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.²⁷⁰ For example, Arm has sought, and is still seeking, to develop a presence in the server market.²⁷¹ Nuvia was expected to provide Arm with a foothold in this segment where x86 dominates.²⁷² However, Qualcomm's actions resulted in the diversion of Nuvia's efforts away from developing a CPU for servers, which have undermined Arm's planned expansion into the segment.

109. As discussed previously in this report, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁷⁰ Discussions with Will Abbey and Paul Williamson.

²⁷¹ Discussions with Will Abbey and Paul Williamson.

²⁷² Discussions with Will Abbey and Paul Williamson.

²⁷³ QCARM_3314892 - 915 at 893.

²⁷⁴ ARM_00002198 - 202 at 198.

²⁷⁵ ARM_00000045.

■ Upon announcing the acquisition of Nuvia, Qualcomm's January 2021 press release stated that "[t]he addition of NUVIA CPUs to Qualcomm Technologies' already leading mobile graphics processing unit (GPU), AI engine, DSP and dedicated multimedia accelerators will further extend the leadership of Qualcomm Snapdragon platforms, and positions Snapdragon as the preferred platform for the future of connected computing."²⁷⁸ In its Form 10-K filing, Qualcomm reported that "[u]pon completion of development, NUVIA's technologies are expected to be integrated into certain QCT products."²⁷⁹

110. With the loss of Nuvia's focus on developing a data center CPU, ■

■²⁸⁰ As described in a

December 2020 Gartner industry report:

111. However, Gartner stated that, "[t]o date, none of these vendors have achieved significant success, and many have had to reevaluate their developments or fallen by the

²⁷⁶ QCARM_0584330 – 332 at 332.

²⁷⁷ QCARM_0584330 – 332 at 331.

²⁷⁸ <https://www.qualcomm.com/news/releases/2021/01/qualcomm-acquire-nuvia>.

²⁷⁹ Qualcomm Inc Form 10-K for the fiscal year ended September 26, 2021, p. F-30.

²⁸⁰ e.g., Deposition of Tim Herbert, October 25, 2023, p. 257 ("My personal opinion, [Nuvia was] on a path to displace Intel in the server space, and that got completely interrupted by the acquisition [by Qualcomm].").

²⁸¹ ARM_00045266 – 276 at 267.

wayside.”²⁸² Gartner further explained that “[m]ost of these vendors have failed to achieve success with their Arm-based designs due to:

- The lack of per-thread performance for early Arm cores when compared to available x86 processors.
- Immaturity of the vendor ecosystem and software compatibility.
- The operational cost to add additional processor architecture into IT management systems, which was too high for many potential customers.
- The inertia of the IT industry and the data center market, which results in it taking many years for new vendors to displace incumbent vendors.”²⁸³

112. The Gartner report also noted that:

Despite these new and interesting products [by NVIDIA, Amazon Web Services, and a number of Chinese companies], challenges still remain as vendors have to compete with the incumbent x86 architecture, which has significant investments in both CPU development and software ecosystems.²⁸⁴

Gartner further estimated that:

At the same time, there is growing interest in the use of Arm-based processors within the data center. While previously, Arm has had little impact on the data center (ripples on the x86 mill pond), a growing wave of Arm-based solutions is anticipated.²⁸⁵

113. Arm’s challenges in the data center segment were also explained in a December 2021 Arm document related to its now-abandoned corporate transaction with NVIDIA. Specifically, the document indicated that:



²⁸² ARM_00045266 – 276 at 267.

²⁸³ ARM_00045266 – 276 at 268.

²⁸⁴ ARM_00045266 – 276 at 268.

²⁸⁵ ARM_00045266 – 276 at 269.

114. The dominance of Intel's x86 CPUs in the server market is due in part "because they profit from the complete hardware and software ecosystem that is the result of Intel and AMD's long years of developing the market; they also offer incredibly fast response time and excel at tackling complex workloads through multithreading."²⁸⁷ A [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

115. The previously mentioned Arm document also included the following discussion points related to Arm's efforts to significantly penetrate the data center market.

- "The x86 ISA is ubiquitous in datacenters, and has been for decades, leading to the development of an enormous software and developer ecosystem. The x86 ecosystem has 'one trillion lines of code' optimized for its architecture, creating a compelling reason for customers to choose x86 over Arm. These lines of code support critical software offerings that are directly available on x86 but unavailable on Arm, including Microsoft's enterprise apps, Salesforce, Adobe, SAP, Oracle ERP, Workday, ServiceNow, and Intuit. [] The lack of competitive Arm ecosystem is also corroborated by Broadcom, Qualcomm and Marvell's

²⁸⁶ ARM_00088656 - 684 at 667.

²⁸⁷ <https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>.

²⁸⁸ QCARM_3314892 - 915 at 899.

²⁸⁹ QCARM_3314892 - 915 at 905.

²⁹⁰ [REDACTED]

exit from the general-purpose Arm-based CPU IP datacenter market segment.”²⁹¹

- “Datacenter and PC, two markets that SoftBank targeted with its investments in Arm, are far more difficult to crack. Unlike Arm, the x86 incumbents in datacenter and PC (Intel and AMD) benefit from an established ecosystem of developers, software, systems, and peripherals. They are also vertically integrated, enjoying profits generated from multiple levels of the technology stack, allowing them to make massive R&D investments. As a result, any competitor following an IP-only licensing model, like Arm, is at a major ecosystem and economic disadvantage.”²⁹²
- “In addition, Arm does not have the systems building expertise, the software engineering scale, or the R&D resources of x86 vendors like Intel and AMD. Even under the most optimistic projections, standalone Arm could not generate the revenue necessary to invest and compete toe-to-toe with the entrenched x86 incumbents.”²⁹³
- “To date, Arm has only managed to achieve limited inroads in datacenter, mainly licensing to Amazon, which makes custom chips for its own use, and start-up Ampere Computing, the only entity that offers merchant Arm central processing units (‘CPUs’) for datacenter.”²⁹⁴
- “These observations are not criticisms of Arm’s technology or engineering team. Arm has great engineering talent in the areas where it focuses. But as a standalone IP licensing business, and without access to further capital, Arm has inherent scale, scope, and economic limitations that would impact Arm’s future as a standalone licensing firm.”²⁹⁵
- “Arm’s limitations as a standalone, IP-licensing only entity, have become apparent over many years. Arm licensees, including Broadcom, Qualcomm, and more recently Marvell, have tried and failed to penetrate datacenter and PC. As mere licensees, they were neither able to direct Arm to make the necessary investment in datacenter and PC CPU, nor able to infuse Arm with ecosystem-building expertise it needs.”²⁹⁶
- “[Intel Foundry Services] is a strong challenge to Arm’s efforts in the datacenter and PC markets. Customization was Arm’s greatest selling

²⁹¹ ARM_00088656 – 684 at 667 – 668.

²⁹² ARM_00088656 – 684 at 658.

²⁹³ ARM_00088656 – 684 at 658.

²⁹⁴ ARM_00088656 – 684 at 658.

²⁹⁵ ARM_00088656 – 684 at 658.

²⁹⁶ ARM_00088656 – 684 at 659.

point in the datacenter, as Arm does not have the mature ecosystem or massive R&D resources that Intel can bring to bear. Now Arm's handful of datacenter customers can create custom x86 CPUs that will benefit from the massive x86 code base.”²⁹⁷

- “For Arm, investing in datacenter and PC has become a high-risk investment.”²⁹⁸

116. Despite these headwinds, Arm reiterated its commitment to developing the server market in its 2nd Amended F-1 Registration Statement, stating that the “market[] represent[s] a significant portion of [its] revenue growth opportunity.”²⁹⁹

117. Arm indicated that not developing the data center market would adversely affect its business, stating that [REDACTED]

[REDACTED]³⁰⁰ With Qualcomm’s acquisition of Nuvia and the abandonment of Nuvia’s data center CPU, Arm’s statements indicate that its attempt to broaden its toehold in the data center segment is uncertain and/or significantly delayed. This is especially the case as the significant amount of investment to develop custom CPUs, which can “cost hundreds of millions of dollars.”³⁰¹

118. In sum, while Arm’s ALAs and TLAs (including the Nuvia agreements) [REDACTED] [REDACTED] Arm’s execution of them and the specific terms agreed to can be influenced at least in part by Arm’s expectation that the licensee will help it gain a foothold in a new industry or market segment, as was the case with Nuvia.³⁰²

²⁹⁷ ARM_00088656 - 684 at 661.

²⁹⁸ ARM_00088656 - 684 at 661.

²⁹⁹ ARM_01259705 - 0105 at 9738.

³⁰⁰ ARM_01259705 - 0105 at 9738.

³⁰¹ Deposition of Simon Segars, November 16, 2023, pp. 79 - 80.

³⁰² Discussions with Will Abbey and Paul Williamson.

119. In my opinion, the scope of the harm of undermining Arm's expansion into new segments and markets cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

E. Significant Decrease in Licensing Revenue and Arm's Investment in Research and Development

120. The significant decrease in Arm's revenue and investment in research and development ("R&D") and innovation resulting in the loss of control of Arm's intellectual property stemming from Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.³⁰³

121. Arm's loss of control of its intellectual property and licensing ecosystem, as described above, is likely to result in decreased licensing revenue which, in turn, would result in decreased investment in R&D, which will harm Arm's ability to improve its technology going forward in detrimental ways that cannot be readily quantified with reasonable certainty.³⁰⁴

122. Arm's innovations are reliant on its R&D investments. Arm states that "[r]esearch and development is at the heart of [its] business and critical to [its] future success. Accordingly, [it has] always invested, and will continue to invest, significant resources in [its] R&D program. [Arm's] vision to invest and develop new products is driven by [its] desire to maintain or increase [its] market share and create value for [its] customers."³⁰⁵ Mr. Williamson's testimony highlights Arm's drive to develop and innovate, stating that "[w]e are an ambitious technology company and we always want our product to be the best it can be. It improves our market opportunity both in market share and in value terms if it is the best performing CPU in the markets we

³⁰³ Discussions with Paul Williamson.

³⁰⁴ Discussions with Paul Williamson.

³⁰⁵ ARM_01259705 - 0105 at 9804.

operate.”³⁰⁶

123. Arm describes its R&D expenses as follows:



307

124. Arm describes itself as “an engineering-first company, with 4,753 of [its] employees, or approximately 80% of [its] global employees, as of March 31, 2023, focused on research, design, and technical innovation.”³⁰⁸ As shown in the figure below, since 2019, Arm has incurred R&D expenses totaling approximately \$3.3 billion, which comprises over 40% of Arm’s revenue.

309



125. The importance of Arm’s R&D investment to its future success is underscored in its 2nd Amended F-1 filing, as shown below.

- “We will have to make significant expenditures to continue developing our semiconductor products and other products. The long development time of generally five or more years from the initial design of our semiconductor products until its incorporation into new end-user applications can place significant strain on our financial resources and personnel.”³¹⁰

³⁰⁶ Deposition of Paul Williamson, November 9, 2023, p. 227.

³⁰⁷ ARM_01259705 - 0105 at 9804 - 805.

³⁰⁸ ARM_01259705 - 0105 at 9721.

³⁰⁹ ARM_00000510 - 632 at 535; ARM_00000382 - 509 at 416; ARM_00000244 - 381 at 281;
<https://www.currency.me.uk/convert/gbp/usd>.

³¹⁰ ARM_01259705 - 0105 at 9739.

- “To remain competitive, we must continue to develop new products, applications; and enhancements to our existing products and services, particularly as next generation technology is adopted by market participants. Allocating and maintaining adequate research and development resources, such as the appropriate personnel and development technology, to meet the evolving demands of the market is essential to our continued success....”³¹¹
- “We have substantially increased our R&D investment to focus on long-term returns and to replicate the strong position that we maintain in smartphones and in other markets, such as automotive, networking equipment, cloud compute and industrial IoT. Each generation of processor is typically more advanced and more complex than the previous generation, which requires increased development efforts that may be partially offset by improvements in productivity. Consequently, each year we increase our R&D investment in line with the increased development needs of the next generation of products.”³¹²

126. However, Arm’s R&D investments are at risk based on Qualcomm’s and Nuvia’s failure to adhere to the Nuvia ALA.

127. Arm’s R&D investments are tied to its revenue stream. As such, any significant changes to Arm’s expected revenues can impact Arm’s future R&D activities, which in turn can lead to a further decline in revenue. Mr. Segars testified that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]³ This relationship between revenue and R&D is illustrated in Arm’s documents, as shown below.

- “Our customers may decide to license our ISA and develop their own processors based on our ISA, rather than utilize our predeveloped products through an implementation license, resulting in less fees paid to us. Customers may choose to develop their own processors if they believe they can do so more effectively than us or if supply and capacity constraints within the semiconductor industry further incentivize vertical

³¹¹ ARM_01259705 – 0105 at 9745.

³¹² ARM_01259705 – 0105 at 9804.

³¹³ Deposition of Simon Segars, November 16, 2023, p. 192.

integration in an effort to secure additional control over their supply chains.”³¹⁴

- “If our customers, and particularly one or more key customers from whom we generate a significant portion of our total revenues, elect to develop their own processors based on our ISA, the market for our developed processor portfolio would decline, which could have a material adverse effect on our business, results of operations, financial condition and prospects.”³¹⁵
- “Additionally, certain of our customers have in the past sought, and customers may in the future seek, to renegotiate pre-existing contractual commitments. [] [S]ignificant reductions in existing contractual commitments could have a material adverse effect on our financial condition and results of operations.”³¹⁶
- “Our ability to fund research and development expenditures depends on generating sufficient revenue and cash flows from operations and the availability of external financing, if necessary. Our research and development expenditures, together with other ongoing operating expenses, is a substantial drain on cash flow and may decrease cash balances, which may limit our ability to pursue other potentially attractive initiatives.”³¹⁷
- “As a result, the architectural licensees pose a threat to Arm’s implementation IP business. When architectural licensees create implementations that are more advanced or powerful than Arm’s own, innovation and competition suffer. Arm ultimately will find it increasingly difficult to fund its own engineering teams to create implementation IP for its implementation licensees who need that IP to compete against the architectural licensees. Instead, Arm could be pressured to further cut back on investment to drive profitability, while Apple and Qualcomm create their proprietary designs and chips for the downstream markets, which cannot be sublicensed to other companies.”³¹⁸
- “This is not a theoretical risk. Arm’s architectural licensees are among the most profitable technology companies in the world, larger and far better funded than Arm. The architectural licensees also have the means and incentive to challenge Arm for engineering talent, risking a downward spiral—*i.e.*, Arm must pay more to retain its engineers, which increases Arm’s costs, which makes Arm less profitable, which discourages Arm from making further investments in its own implementation IP, which

³¹⁴ ARM_01259705 – 0105 at 9737.

³¹⁵ ARM_01259705 – 0105 at 9737.

³¹⁶ ARM_01259705 – 0105 at 9744.

³¹⁷ ARM_01259705 – 0105 at 9744.

³¹⁸ ARM_00088656 – 684 at 663.

makes Arm less competitive with the architectural licensees (and less competitive with x86), and so on.”³¹⁹

128. As discussed above, Arm’s R&D investments are the heart of its business and critical to its future success. Arm’s significant levels of R&D are based on its licensing revenue.

However, as previously discussed in this report, [REDACTED]

[REDACTED] The cost savings to Qualcomm are revenue losses to Arm. Additionally, as discussed previously in this report, other existing and prospective licensees may seek alternatives to Arm, resulting in decreased revenues to Arm. As such, the potential loss of revenue from (1) Qualcomm’s and Nuvia’s alleged breach and (2) the resulting decrease in revenue from other partners over time will have a compounding effect on Arm in the future if it is unable to continue its R&D activities at a level necessary to remain competitive. In other words, as Mr. Segars testified there is a [REDACTED] or as the above noted Arm document stated, a [REDACTED]

This loss is not quantifiable.

129. In my opinion, the scope of the harm associated with the significant decrease in licensing revenue and Arm’s investment in research and development cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

F. Significant Decrease in Arm’s Reputation and Goodwill

130. The harm to Arm’s reputation and decrease in Arm’s goodwill resulting from

³¹⁹ ARM_00088656 - 684 at 663.
[REDACTED]

Defendants' breach of the Nuvia ALA cannot be readily quantified and the associated monetary damages cannot be reasonably ascertained.³²¹

131. Arm's brand and reputation are critical aspects of its success. As discussed above, Arm's history of innovation has resulted in significant success and presence in the market, particularly in the mobile segment. Arm's 2nd Amended F-1 filing states that its "brand and reputation are critical factors in [its] relationships with customers, employees, governments, suppliers, and other stakeholders. [Its] failure to address, or the appearance of [its] failure to address, issues that give rise to reputational risk...could significantly harm [Arm's] brand and reputation."³²² Qualcomm's and Nuvia's actions, and their ability to avoid the requested specific performance may have a detrimental impact on Arm's goodwill through harm to its brand and reputation.

132. Mr. Williamson discussed the harm to Arm's goodwill stating that "there are multiple harms, including potentially loss of revenue, [] but also *reputational damage* and a fundamental long-term business challenge created by a potential situation where ARM licensees do not feel bound to the terms of our contracts. So it is harmful to our business in broader terms than purely lost revenues, but that is not exhaustive."³²³ Mr. Williamson also testified that "ARM has a reputation of trust with its partners who build technology based on ARM's technology and services associated with it. Their success is a shared success business with ARM, and trust is an important element of that continuing business practice."³²⁴ Similarly, Mr. Williamson testified that "[s]hould we not protect our technology, it could impact the trust that companies more

³²¹ Discussions with Paul Williamson.

³²² ARM_01259705 – 0105 at 9758.

³²³ Deposition of Paul Williamson, November 9, 2023, p. 243 (emphasis added).

³²⁴ Deposition of Paul Williamson, November 9, 2023, p. 246.

broadly feel in the ARM business model and the security based on ARM's technology."³²⁵ Finally, Mr. Williamson stated that "[i]t is impossible for me to know the scale of the harm caused already or the number of companies who have reduced their trust in ARM and therefore not approached us to build their business within our ecosystem."³²⁶

133. Mr. Abbey also testified regarding harm to Arm's brand (and thus goodwill), stating that "the end result is a contract. At the end of the day, Arm's an IP company. Our confidential information, our intellectual property is so germane to what we do. And a partner that continues to use Arm confidential information without a contract is – damages our brand and damages our reputation."³²⁷ Mr. Abbey also stated that "Qualcomm does not have rights to continue to exploit the NUVIA design. Arm intellectual property is in that design, and therefore, it causes brand damage to Arm."³²⁸ Further, Mr. Abbey testified that "[i]f all partners had the belief that I acquire a company, I can do anything I want with Arm technology, that weakens our brand and therefore is important for us to protect that in the marketplace. [A lot of] damage is being done to the idea that this thing is in public knowledge that this is taking place."³²⁹

134. Harm to Arm's brand and reputation can be wide ranging. Arm has stated that:

Damage to [its] brand and reputation could reduce demand for [its] products and adversely affect [its] business, operating environment and the trading price of [its] securities. Damage to [its] reputation may also make us less attractive to current and prospective employees relative to [its] competitors, particularly given the intensely competitive market for highly skilled employees. Moreover, repairing [Arm's] brand and reputation may be difficult, time-consuming, and expensive. The heightened competitive pressures could result in a loss of customers or a reduction in revenues or revenue growth rates, all of which could

³²⁵ Deposition of Paul Williamson, November 9, 2023, p. 246.

³²⁶ Deposition of Paul Williamson, November 9, 2023, p. 248.

³²⁷ Deposition of Will Abbey, October 27, 2023, p. 324.

³²⁸ Deposition of Will Abbey, October 27, 2023, p. 361.

³²⁹ Deposition of Will Abbey, October 27, 2023, p. 361.

adversely affect [its] business, results of operations, financial condition and prospects.³³⁰

135. As illustrated above and through this report, Arm's goodwill and reputation are critical to its success and market standing. Arm's brand as an innovator has been built over many decades. This includes harm to Arm's reputation due to a lessened perception in the enforceability of contractual terms, and potential increased need by Arm to enforce those terms through litigation. Harm to Arm's goodwill and reputation cannot be measured as a result of Qualcomm's and Nuvia's alleged actions.

136. In my opinion, the scope of the harm associated with the significant damage to Arm's reputation and goodwill cannot be readily determined or quantified and the damages associated with that harm cannot be determined with reasonable certainty. Therefore, monetary damages cannot adequately compensate Arm for this harm.

G. Inadequacy of Damages Exacerbated by Several Additional Factors

137. Several additional factors in this case exacerbate the potential harms to Arm, and the uncertainty of monetary damages adequate to compensate for those harms, if Defendants are found liable for breaching the Nuvia ALA but are not required to discontinue use and distribution of Arm Technology, Arm Confidential Information, and any products embodying such technology or information (including Nuvia-based Cores).

138. For example, not only is Qualcomm a long-term Arm licensee, it is also one of Arm's largest licensees by revenue.³³¹ Qualcomm made up 11% of Arm's total revenue for the fiscal year ended March 30, 2023.³³² Given the magnitude of Qualcomm's contribution to Arm's financial performance (as well as Qualcomm's overall status in the industry), Qualcomm's

³³⁰ ARM_01259705 – 0105 at 9758.

³³¹ Deposition of Rene Haas, December 12, 2023, p. 107.

³³² ARM_01259705 – 0105 at 9754; See also Deposition of Simon Segars, November 16, 2023, pp. 10 – 13.

alleged actions would have an outsized impact on Arm. To the extent Qualcomm is permitted to use the Nuvia-based Cores developed under the Nuvia ALA, other industry participants (and Arm licensees) may be emboldened given Qualcomm's size as an Arm licensee and recognition as an industry leader.

139. Another exacerbating factor is the relative speed with which the CPU industry develops. Emerging technologies develop rapidly and may not be foreseen.³³³ Arm asserts that it is "continuously evaluating emerging markets and technologies that may enable [it] to create more advanced products that bring more value to [it]s customers and ecosystem."³³⁴ For example, Arm states that it is "leading the way in integrating AI and ML capabilities across all devices through [its] highly scalable architecture. All modern smartphones are AI and ML capable by virtue of their Arm processors, and we are increasingly working with companies in other markets, such as consumer electronics and automotive, to deploy AI-based solutions."³³⁵ However, Arm has stated that "[i]f it fail[s] to develop new products in response to, or in anticipation of, rapid technological changes in [its] industry or the industries [it] serve[s], [its] business may be materially and adversely affected."³³⁶ Further, Arm has indicated that both known and unknown rapid technological changes make "the future market for [its] products [] difficult to predict."³³⁷ Given the rapidly evolving landscape of electronics (which cannot be fully anticipated), the total harm to Arm is unpredictable. For example, as previously discussed, Arm gained a first mover advantage in the mobile CPU segment, but Arm's ability to leverage this advantage to emerging markets could be in jeopardy due to Qualcomm's and Nuvia's alleged

³³³ Discussions with Will Abbey and Paul Williamson.

³³⁴ ARM_01259705 – 0105 at 9722

³³⁵ ARM_01259705 – 0105 at 9722.

³³⁶ ARM_01259705 – 0105 at 9724.

³³⁷ ARM_01259705 – 0105 at 9739.

actions. This sort of impact is amplified by the so-called “Butterfly Effect.”³³⁸ In other words, future triggering events could magnify the potential impacts of Qualcomm’s and Nuvia’s alleged actions (discussed previously in this report) and may set into motion events that may be different (potentially significant) in the “but for” scenario in which Qualcomm and Nuvia act within the bounds of its agreements as sought by Arm. For example, an event in the server market that significantly increases demand of server CPUs would have an even larger impact on Arm given Arm’s small market presence in that space and its delayed development of the segment due to Nuvia’s shift away from developing what was a promising alternative to x86-based processors. Or in another example, a decrease in Arm’s R&D activities (as previously discussed) could result in its inability to capitalize on currently unforeseen CPU applications.

140. The uncertainty of the harms discussed in this report are particularly acute given that they involve the actions of parties (*i.e.*, current and prospective licensees), unknown emerging market segments, among other uncertainties. Such factors include but are not limited to the following.

- The ability to quantify the number prospective licensees and related revenue is not ascertainable.
- The difficulty in measuring the financial impact of actions that current and prospective licensees may take based on the decisions of other licensees.
- The ability to measure the goodwill and reputational harm due to Qualcomm’s and Nuvia’s alleged actions would be difficult.
- The uniqueness of Qualcomm as a market leader (and one of Arm’s largest customers) which would have an outsize impact on its alleged breach.
- The value of Arm’s first mover advantage in emerging markets and the magnitude of the loss is difficult to measure.

³³⁸ <https://www.forbes.com/sites/startswithabang/2018/02/13/chaos-theory-the-butterfly-effect-and-the-computer-glitch-that-started-it-all/?sh=4b460bee69f6>; <https://hbr.org/2022/08/in-uncertain-times-the-best-strategy-is-adaptability>.

- The loss of revenue from the factors discussed in this report would have an unpredictable impact on Arm's total financial condition and market presence.

VIII. TRADEMARK INFRINGEMENT

141. I am informed and understand that Arm seeks a declaratory judgment that Defendants unlicensed use of Arm's trademarks will constitute trademark infringement.³³⁹ I am informed and understand that Arm is not aware of any trademark infringements by Defendants to date.³⁴⁰ I may be asked to opine on potential damages associated with trademark infringement if any such infringement is alleged to have occurred before trial of this matter. I reserve my right to do so.

IX. OTHER ISSUES

142. This report represents my analysis, opinions, and conclusions at this time and is based on information available to me as of the date above. The citations listed in this report are illustrative, and as part of my analysis, I also considered the additional documents and other information listed on Schedule 2. If additional information or testimony becomes available to me, I may revise or supplement my analysis, opinions, and conclusions, and I may modify or supplement my report as necessary. I may testify at trial regarding any related matter raised by the parties after the date of this report if asked to do so by the Court or the parties' attorneys. I may be asked to develop additional schedules or exhibits for trial purposes related to my analysis, opinions, and conclusions. I may also be asked to develop and rely on demonstratives at trial or any pre-trial proceeding. I may also be asked to develop additional schedules or exhibits if asked to do so by the Court or the parties' attorneys, post-trial. This report is intended solely for use in

³³⁹ Complaint, August 31, 2022, pp. 18 - 22.

³⁴⁰ Arm Ltd.'s Second Supplemental Objections and Responses to Qualcomm's First Set of Interrogatories Nos. 1 - 11, November 17, 2023, pp. 17 - 26.

the above-referenced litigation and is not to be used for any other purpose.



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Professional Affiliations

State Bar of Texas' Grievance Committee, Committee Member, 2004 – 2009

Federal Bar Association, South Texas Chapter, Treasurer, 2007 – 2015

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W. Todd Schoettelkotte is a Senior Managing Director of Ocean Tomo, a part of J.S. Held LLC, a global consulting firm providing specialized technical, scientific, financial, and advisory services. Mr. Schoettelkotte has more than 25 years of experience in the evaluation and quantification of economic damages arising from patent, copyright and trademark infringement, and trade secret misappropriation disputes. His clients have included numerous Fortune 500 companies in a wide variety of industries including semiconductor, telecommunication, energy, consumer products, life sciences and computers (hardware, software and the internet). Mr. Schoettelkotte has been recognized by Intellectual Asset Management Magazine as one of the leading patent damages experts in the United States. Mr. Schoettelkotte's background is in accounting, finance and economics, and he has a specific, focused understanding of those issues integral to the valuation and management of intellectual property.

Intellectual Property Valuation

Mr. Schoettelkotte has directed numerous valuation projects related to patents, trademarks and trade secrets. A significant portion of his practice is focused on the determination of royalty rates and terms for licensing agreements. Additionally, Mr. Schoettelkotte has conducted numerous studies involving lost profits and unjust enrichment.

In the process of assisting clients in the valuation of intellectual property assets, Mr. Schoettelkotte has participated in the identification and review of business plans, market studies, financial documents and other related information.

Patent, Copyright and Trademark Infringement

Mr. Schoettelkotte has performed market analyses/studies wherein the patented, trademarked or copyrighted product is sold, assessed lost profits stemming from alleged infringements, evaluated the contribution of the patented process/method to the end product and established the economic value of the underlying intellectual property.

Mr. Schoettelkotte is skilled in the application of the Georgia-Pacific factors to the determination of reasonable royalty rates. He has determined reasonable royalty rates within infringement suits on many occasions in numerous industries. Over the course of his career, Mr. Schoettelkotte has reviewed hundreds of license agreements, providing a broad frame of reference for reasonable royalty damages analyses. Mr. Schoettelkotte has testified in federal and state court and arbitration proceedings on matters involving intellectual property valuation, lost profits, reasonable royalty and economic damages issues.

Articles and Presentations

"Intellectual Property Damages," Chicago-Kent College of Law, October 15, 2019

"Damages in Other Areas of Intellectual Property," The University of Arizona IP Conference, March 5, 2018

W. Todd Schoettelkotte

“Impact of Recent Court Cases on ‘Real World’ Royalty Rates,” LES (USA & Canada) Houston Chapter, July 20, 2017

“What is Discoverable and Admissible for Damages, Willfulness and Other Purposes,” Intellectual Property Owners Association, March 21, 2011

“Strategies in Intellectual Property,” Chicago Kent, College of Law, Spring 2004 – 2010

Damages, Part II: “Litigation Strategies” – 15th Annual Advanced Patent Law Institute - University of Texas School of Law, October 28-29, 2010

“IP Damages and Valuation,” Global Intellectual Property Management, Georgetown University Law Center, July 2, 2008

“Keys for Effectively Working with Your Damages Expert Throughout the Litigation Life Cycle,” Houston Bar Association, March 22, 2007

“Advanced Evidence and Discovery – Working With Experts From Start To Finish” – Texas Bar Association, April-May 2006

“Trademarks – Financial Disclosure and Corporate Governance” – International Trademark Association, Emerging Issues in Trademark Law Forum, February 2-3, 2006

“Valuation of IP – A Licensing Perspective” – Lighthouse Seminar Group, IP Licensing Nuts & Bolts, March 3, 2005

“Measuring the Value of Damages in Trademark Infringement Claims” – DuPont’s 18th Annual CLE Intellectual Property Law Seminar, October 12, 2004

“Measuring the Value of Damages in Patent and Trademark Claims” – Houston CPA Society, September 2004

“Measuring Damages in Trademark Infringement and Related Claims in Light of Recent Court Decisions” – The 19th Annual Intellectual Property Law Conference – American Bar Association, April 1, 2004

“Intellectual Property Damages: Patents & Trademarks” – Houston CPA Society “Litigation and Valuation Services Committee,” January 28, 2004

Co-Author: “Accounting for Attorneys” – University of Oregon School of Law, November 12, 2003

“What are the Financial Stakes in Litigation? What are the Costs and the Return on Investment (ROI) That Can Be Expected? The Question of Intangible Returns?” – 2003 Fourth International Conference on Intellectual Property by CNCPI, October 7, 2003, Paris, France

“Current Issues in the Analysis of Reasonable Royalties in Patent Infringement Actions” – 2003 Licensing Executives Society Annual Meeting, September 24, 2003

Co-Author FTI Consulting Training Course: “Calculating Damages in Patent Infringement – A Lost Profits and Reasonable Royalty Case Study,” July 17, 2003



W. Todd Schoettelkotte
Four Year List of Testimony
As of December 2023

CASE DESCRIPTION / TYPE OF TESTIMONY

In the Matter of Certain Semiconductor Devices, and Methods of Manufacturing Same and Products Containing the Same (Respondents-Innoscience); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition

Demaray LLC v. Samsung Electronics Co. Ltd., et al.: U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition, Supplemental Report, Deposition

Persawvere, Inc. v. Milwaukee Electric Tool, Corporation; U.S. District Court, District of Delaware (Wilmington), Rebuttal Expert Report, Deposition, Trial

Beacon Navigation GmbH v. Bayerische Motoren Werke AG; BMW of North America, LLC and BMW Manufacturing Co., LLC; U.S. District Court, Southern District of Michigan, Expert Report, Deposition

Ningde Amperex Technology Limited v. Zhuhai CosMX Battery Co., Ltd., et al.; U.S. District Court, Eastern District of Texas (Marshall), Initial Report, Rebuttal Expert Report, Deposition

Plastipak Packaging, Inc. v. Nestlé Waters North America, Inc.; U.S. District Court, Eastern District of Virginia (Alexandria), Opening Expert Report, Rebuttal Expert Report, Supplemental Expert Report, Supplemental Rebuttal Expert Report, Deposition

Ollnova Technologies Limited v. ecobee Technologies, ULC d/b/a Ecobee; U.S. District Court, Eastern District of Texas (Marshall), Rebuttal Expert Report, Deposition, Trial

EIS, Inc. v. IntiHealth GER GmbH, et al.; U.S. District Court, District of Delaware, Expert Report, Rebuttal Expert Report, Commercial Success Report, Reply Report, Trial

HID Global Corporation v. Vector Flow., et al.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition

BlueRadios, Inc. v. Kopin Corporation, Inc.; U.S. District Court, District of Colorado (Denver), Rebuttal Expert Report, Deposition, Supplemental Rebuttal Expert Report, Deposition

Bay Materials, LLC v. 3M Company; U.S. District Court, District of Delaware (Wilmington), Declaration, Deposition, Commercial Success Report, Deposition

Continuous Composites, Inc. v. Markforged, Inc.; U.S. District Court, District of Delaware, Expert Report, Reply Report, Deposition

Fate Therapeutics, Inc., et al. v. Shoreline Biosciences, Inc., et al.; U.S. District Court, Southern District of California (San Diego), Rebuttal Expert Report, Deposition

Delta Air Lines, Inc. v. Marriott International, Inc.; U.S. District Court, Northern District of Georgia (Atlanta), Rebuttal Expert Report, Supplemental Rebuttal Report, Deposition



W. Todd Schoettelkotte
Four Year List of Testimony
As of December 2023

CASE DESCRIPTION / TYPE OF TESTIMONY

Textron Innovations Inc. v. SZ DJI Technology Co., Ltd., et al.; U.S. District Court, Western District of Texas (Waco), Expert Report, Deposition, Supplemental Expert Report, Trial

VoIP-Pal.com, Inc. v. Verizon Communications Inc., et al.; U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition

Ragnarok Game, LLC and ESDFOS, LLC v. ZeniMax Media Inc, et al.; Superior Court of the State of California, County of Los Angeles, Central District, Opening Expert Report, Rebuttal Expert Report, Deposition

DivX, LLC v. Harman International Industries, Inc.; New York Supreme Court, New York County, Expert Report, Rebuttal Expert Report, Deposition

Shimon Maimon v. Lockheed Martin Corporation; Judicial Arbitration and Mediation Services, Rebuttal Expert Report, Deposition, Arbitration

WSOU Investments, LLC d/b/a Brazos Licensing and Development v. ZTE Corporation; U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition

Wonderland Switzerland AG v. Evenflo Company, Inc.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition, Supplemental Expert Report, Trial

NNCrystal US Corporation and The Board of Trustees of The University of Arkansas v. Nanosys, Inc.; U.S. District Court, District of Delaware, Expert Report, Reply Report, Deposition

Pavemetrics Systems, Inc. v. Tetra Tech, Inc. and Tetra Tech Tas Inc.; U.S. District Court, Central District of California (Los Angeles), Expert Report, Deposition, Trial

Global Tubing, LLC v. Tenaris Coiled Tubes, LLC and Tenaris, S.A.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Deposition

The Cookie Department, Inc. v. The Hershey Company, One Brands, LLC; U.S. District Court, Northern District of California (Oakland), Rebuttal Expert Report, Deposition

Unirac, Inc. v. EcoFasten Solar, LLC and Esdec, Inc.; U.S. District Court, District of Delaware, Expert Reports, Deposition

In the Matter of Certain Integrated Circuits, Chipsets, and Electronic Devices, and Products Containing the Same (Respondents); U.S. International Trade Commission, Washington, D.C., Rebuttal Expert Report, Deposition



W. Todd Schoettelkotte
Four Year List of Testimony
As of December 2023

CASE DESCRIPTION / TYPE OF TESTIMONY

In the Matter of Certain High-Density Fiber Optic Equipment and Components Thereof (Complainant); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Witness Statement, Hearing; Enforcement Proceeding - Expert Report, Supplement to the Expert Report, Deposition, 2nd Supplement to the Expert Report, 3rd Supplement to the Expert Report, Witness Statement, 4th Supplement to the Expert Report, Supplement to Witness Statement, Hearing

Blue Mountain Holdings, Ltd., et al. v. Bliss Nutraceuticals LLC, et al.; U.S. District Court, Northern District of Georgia (Atlanta), Expert Report, Deposition

Gibson Brands, Inc. v. Armadillo Distribution Enterprises, Inc. and Concordia Investment Partners, LLC; U.S. District Court, Eastern District of Texas (Sherman), Rebuttal Expert Report, Deposition, Supplemental Rebuttal Expert Report, Trial

Conformis, Inc. v. Medacta USA, Inc. and Medacta International SA; U.S. District Court, District of Delaware, Rebuttal Expert Report, Supplemental Rebuttal Expert Report, Deposition

In the Matter of Certain Silicon Photovoltaic Cells and Modules with Nanostructures, and Products Containing Same (Respondents); U.S. International Trade Commission (Washington, D.C.), Expert Report, Deposition, Witness Statement, Hearing

EcoFactor, Inc. v. Google LLC; U.S. District Court, Western District of Texas (Waco), Expert Report, Deposition, Supplemental Report, Trial, Declaration

G.W. Lisk Company, Inc. v. GITS Manufacturing Company; U.S. District Court, Southern District of Iowa (Central); Expert Report, Reply Report, Deposition

American Eagle Outfitters, Inc. and Retail Royalty Company v. Walmart, Inc.; U.S. District Court, Western District of Pennsylvania (Pittsburgh), Expert Report, Rebuttal Report, Deposition

Simply Wireless, Inc. v. T-Mobile US, Inc., et al.; U.S. District Court, Eastern District of Virginia (Alexandria), Expert Report, Reply Report, Deposition, Sur-Sur Reply Report

Gentex Corporation v. Galvion LTD and Galvion Inc.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition

Kirsch Research and Development, LLC v. DuPont de Nemours, Inc., FT Synthetics, Inc. and Atlas Roofing Corporation; U.S. District Court, Eastern District of Texas (Texarkana), Expert Report, Deposition

Malvern PanAnalytical Inc. v. TA Instruments-Waters LLC and Waters Technologies Corporation; U.S. District Court, District of Delaware (Wilmington), Expert Report, Rebuttal Report, Reply Report, Deposition

Finalrod IP, LLC v. Endurance Lift Solutions, Inc.; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Deposition

Pierce Manufacturing, Inc. and Oshkosh Corporation v. E-One, Inc. and REV Group, Inc.; U.S. District Court, Middle District of Florida (Tampa), Declaration, Expert Report, Deposition, Trial



W. Todd Schoettelkotte
Four Year List of Testimony
As of December 2023

CASE DESCRIPTION / TYPE OF TESTIMONY

Polar Electro Oy v. Suunto Oy, et al.; U.S. District Court, District of Utah (Central), Expert Report, Deposition

Wonderland Switzerland AG v. Evenflo Company, Inc., et al.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition, Trial

Lufkin Industries, Inc. v. International Business Machines Corporation, et al.; 159th Judicial District Court of Angelina County, Texas, Expert Report #1, Supplemental Report #1, Expert Report #2, Supplemental Report #2, Deposition

The Hillman Group, Inc. v. KeyMe, LLC; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Deposition #1, Consolidated Report, Deposition #2

Team Worldwide Corporation v. Academy, LTD d/b/a Academy Sports + Outdoors, et al.; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Rebuttal Report, Deposition #1, Deposition #2, Supplemental Report

Nevro Corp. v. Boston Scientific Corporation, et al.; U.S. District Court, Northern District of California (San Francisco), Expert Report, Supplemental Report, Deposition, Declaration

Carnegie Institution of Washington, et al. v. Pure Grown Diamonds, Inc., et al.; U.S. District Court, Southern District of New York (Foley Square), Expert Report, Supplemental Report, Deposition

In the Matter of Certain High-Density Fiber Optic Equipment and Components Thereof (Complainant); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Witness Statement, Hearing

Nissei ASB Co. and Nissei ASB Machine, Co., LTD. v. R&D Tool & Engineering Co.; U.S. District Court, Western District of Missouri (Western), Expert Report, Reply Report, Deposition

Jager Pro Incorporated v. Bull Creek Welding and Fabrication, Inc.; U.S. District Court, Eastern District of Arkansas (Central), Expert Report, Deposition

CFA Institute v. American Society of Pension Professionals & Actuaries, et al.; U.S. District Court, Western District of Virginia (Charlottesville), Expert Report, Deposition

Legacy Separators, LLC, et al. v. Halliburton Energy Services, Inc., et al.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Rebuttal Report, Deposition, Supplemental Report, Second Supplemental Report, Deposition #2, Trial

Saracen LLC, Saracen Energy Power Advisors LP, Saracen Energy Advisors LP, collectively d/b/a The Saracen Group of Companies v. Sylvain Ross and Marginal Unit, Inc.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Supplemental Report, Second Supplemental Report, Third Supplemental Report, Revised Third Supplemental Report, Trial

Innovation Sciences, LLC v. HTC Corporation; U.S. District Court, Eastern District of Texas (Sherman), Expert Report, Deposition

In the Matter of Certain Digital Video Receivers, Broadband Gateways, and Related Hardware and Software Components (Respondents); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Hearing



W. Todd Schoettelkotte
Four Year List of Testimony
As of December 2023

CASE DESCRIPTION / TYPE OF TESTIMONY

Under Armour, Inc. v. Battle Fashions, Inc. and Kelsey Battle; U.S. District Court, Eastern District of North Carolina (Western), Expert Report, Deposition, Supplemental Report

Finalrod IP, LLC and R2R and D, LLC d/b/a Superod v. John Crane, Inc., et al.; U.S. District Court, Western District of Texas (Midland), Expert Report, Rebuttal Report, Supplemental Report, Deposition

In the Matter of Certain Wireless Mesh Networking Products and Related Components Thereof (Complainant); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Witness Statement, Hearing

Liqwd, Inc. and Olaplex LLC v. L'Oréal USA, Inc., et al.; U.S. District Court, District of Delaware (Wilmington), Declaration, Deposition #1, Supplemental Declaration, Deposition #2, Expert Report, Deposition #3, Trial

Nevro Corp. v. Stimwave Technologies, Inc.; U.S. District Court, District of Delaware (Wilmington), Declaration, Deposition, Reply Declaration

XY, LLC v. Trans Ova Genetics, LC; U.S. District Court, District of Colorado (Denver), Expert Report, Deposition, Trial, Declaration

Maui Jim, Inc. v. SmartBuy Guru Enterprises, et al.; U.S. District Court, Northern District of Illinois (Eastern), Expert Report, Deposition

MPEG LA, L.L.C. v. Toshiba America Information Systems, Inc.; Supreme Court of the State of New York, County of New York, Expert Report, Deposition

Team Worldwide Corp. v. Intex Recreation Corp, et al.; Federal Arbitration, Inc., Hearing

Justice Laub and Daniel Kanes v. Nicholas Horbaczewski, Drone Racing League, Inc., et al.; U.S. District Court, Central District of California (Western), Expert Report, Deposition

ASM Holding B.V. v. Hitachi Kokusai Electric, Inc.; International Centre for Dispute Resolution, Hearing

Power Integrations, Inc. v. Fairchild Semiconductor International, Inc., et al.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Deposition, Supplemental Report, Trial, Declaration

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

ARM_											
Begin	End										
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00000022	00000023	00067288	00067289	01228029	01228029	01236577	01236579	01239459	01239459	01241187	01241187
00000045	00000045	00081962	00081963	01228030	01228030	01236580	01236580	01239460	01239460	01241589	01241589
00000244	00000381	00082925	00082937	01228031	01228031	01236581	01236587	01239461	01239461	01241597	01241598
00000382	00000509	00085677	00085677	01228032	01228032	01236588	01236593	01239462	01239462	01243410	01243629
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00040237	00040241	00097527	00097528	01228054	01228054	01236734	01236739	01239495	01239495	01246043	01246066
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00045334	00045335	00109822	00109852	01228061	01228061	01239443	01239443	01240283	01240304	01246198	01246224
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00056900	00056909	01228026	01228026	01235144	01235144	01239453	01239453	01240449	01240469	01266995	01267070

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

ARM_		QCARM_		QCARM_	
Begin	End	Begin	End	Begin	End
01271909	01271926	2426856	2426881	3520822	3520825
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01305515	01305515	2426888	2426888	3526546	3526553
01309668	01309669	2426889	2426891	3536886	3536888
01427450	01427492	2426892	2426894	3536889	3536891
01427493	01427522	2426895	2426897	3536892	3536894
01427523	01427537	2554114	2554116	3536895	3536897
MASA_		3241389	3241393	3536898	3536901
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0363482	0363482	3438114	3438152	3438113	3438113
0550518	0550529	3438153	3438193	3438152	3438152
0557206	0557207	3438194	3438234	3438193	3438193
0569461	0569494	3438235	3438275	3438235	3438275
0584330	0584332	3452409	3452442	3452409	3452442
0591730	0591732	3452662	3452664	3452662	3452664
0591733	0591736	3452665	3452667	3452665	3452667
0591737	0591740	3452668	3452672	3452668	3452672
0591741	0591745	3452720	3452723	3452720	3452723
0592425	0592431	3452805	3452807	3452805	3452807
2414807	2414813	3453808	3453810	3453808	3453868
2417783	2417783	3453866	3453868	3453866	3453872
2423231	2423233	3453870	3453872	3453870	3453874
2424464	2424466	3453873	3453874	3453873	3453874
2424496	2424498	3453875	3453877	3453875	3453877
2424621	2424623	3453879	3453881	3453879	3453881
2425046	2425048	3454302	3454304	3454302	3454304
2425297	2425299	3457104	3457104	3457104	3457104
2426801	2426803	3460229	3460233	3460229	3460233
2426804	2426806	3460451	3460453	3460451	3460453
2426807	2426814	3519910	3519912	3519910	3519912
2426815	2426821	3520810	3520812	3520810	3520812
2426822	2426836	3520813	3520815	3520813	3520815
2426837	2426852	3520816	3520818	3520816	3520818
2426853	2426855	3520819	3520821	3520819	3520821

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

Legal Documents and Related Exhibits

2022-08-31 - Complaint
 2022-10-26 - Defendants' Answer and Defenses to Plaintiff's Complaint and Jury Demand and Defendants' Amended Counterclaim
 2023-02-27 - Arm Ltd.'s Objections and Responses to Qualcomm's First Set of Interrogatories, Nos. 1-11
 2023-02-27 - Arm Ltd.'s Objections and Responses to Qualcomm's First Set of Requests for Production, Nos. 1-36
 2023-02-27 - Defendants' Responses and Objections to Plaintiff's First Set of Interrogatories, Nos. 1-13
 2023-02-27 - Defendants' Responses and Objections to Plaintiff's First Set of Requests for Production, Nos. 1-51
 2023-04-04 - Arm Ltd.'s First Amended Objections and Responses to Qualcomm's First Set of Requests for Production, Nos. 1-36
 2023-04-26 - Corrected Second Amended Complaint for Willful Patent Infringement
 2023-05-04 - Defendants' Responses and Objections to Plaintiff's Second Set of Requests for Production, Nos. 52-58
 2023-05-05 - Arm Ltd.'s First Objection and Responses to Qualcomm's Second Set of Requests for Production, Nos 37-50
 2023-06-23 - Defendants' First Supplemental Responses and Objections to Plaintiff's First Set of Interrogatories, Nos. 1-4 and 6
 2023-07-14 - Arm Ltd.'s First Objection and Responses to Qualcomm's Third Set of Requests for Production, Nos. 51-54
 2023-08-23 - Defendants' Responses and Objections to Plaintiff's Third Set of Requests for Production, Nos. 59-122
 2023-10-02 - Arm Ltd.'s Objections and Responses to Qualcomm's Second Set of Interrogatories, Nos. 12-19
 2023-10-02 - Plaintiff Arm Ltd.'s Objections and Responses to Defendant Qualcomm's Fourth Set of Requests for Production, Nos. 55-70
 2023-10-20 - Defendants' Responses and Objections to Plaintiff's First Set of Requests for Admission, Nos. 1-30
 2023-10-26 - Defendants' Supplemental and Amended Response and Objections to Plaintiff's First Set of Interrogatories, No. 5
 2023-10-26 - Correspondence Email from J. Braly to J. Li
 2023-10-27 - Defendants' Responses and Objections to Plaintiff's Second Set of Interrogatories
 2023-11-09 - Arm Ltd.'s Objections and Responses to Qualcomm's Third Set of Interrogatories, No. 20
 2023-11-17 - Arm Ltd.'s First Supplemental Objections and Responses to Qualcomm's Second Set of Interrogatories, Nos. 12-19
 2023-11-17 - Arm Ltd.'s Objections and Responses to Qualcomm's Fourth Set of Interrogatories, Nos. 21-25
 2023-11-17 - Arm Ltd.'s Second Supplemental Objections and Responses to Qualcomm's First Set of Interrogatories, Nos. 1-11
 2023-11-17 - Arm Ltd.'s Supplemental Objections and Responses to Qualcomm's Third Set of Interrogatories, No. 20
 2023-11-17 - Defendants' First Supplemental Reponses and Objections to Plaintiff's Second Set of Interrogatories, Nos. 15-16
 2023-11-17 - Defendants' Responses and Objections to Plaintiff's Fourth Set of Requests for Production, No. 123
 2023-11-17 - Plaintiff Arm Ltd.'s Objection and Responses to Defendant Qualcomm's Fifth Set of Requests for Production, Nos. 71-124
 2023-11-17 - Plaintiff Arm Ltd.'s Responses and Objections to Qualcomm's First Requests for Admissions to Plaintiff, Nos. 1-30

Deposition Transcripts and Related Exhibits

2023-09-22 - Rohit Singh	2023-11-02 - Lynn Couillard	2023-11-28 - Jim Thompson	2023-12-08 - Jonathan Armstrong
2023-10-12 - Manu Gulati	2023-11-03 - Gerard Williams	2023-11-28 - Michael Roberts	2023-12-12 - Rene Haas
2023-10-20 - Ramakrishna Chundur	2023-11-08 - Ziad Asghar	2023-11-29 - Lynn Bos	2023-12-14 - Vivek Agrawal
2023-10-25 - Jignesh Trivedi	2023-11-09 - Paul Williamson	2023-11-30 - Karthik Shivashankar	2023-12-14 - Laura Sand
2023-10-25 - Tim Herbert	2023-11-15 - Christiano Amon	2023-12-01 - Pradeep Kanapathipillai	2023-12-19 - Christine Tran (rough transcript)
2023-10-27 - Nitin Sharma	2023-11-15 - Richard Grisenthwaite	2023-12-07 - Mark Werkheiser	2023-12-20 - Ian Thornton (rough transcript)
2023-10-27 - Will Abbey	2023-11-16 - Simon Segars	2023-12-08 - Geeta Balakrishnan	

Publicly Available Information/Other

Bhandarkar, Dileep, and Douglas W. Clark. "Performance from architecture: comparing a RISC and a CISC with similar hardware organization." Proceedings of the fourth international conference on Architectural support for programming languages and operating systems. 1991
 NuVia, Inc., Private Company Profile, S&P Capital IQ
 Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023
 Qualcomm Inc. Form 10-K for the fiscal year ended September 26, 2021
<https://community.fs.com/article/what-is-a-server-cpu.html>

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

Publicly Available Information/Other (cont.)

<https://hbr.org/2022/08/in-uncertain-times-the-best-strategy-is-adaptability>
<https://investor.qualcomm.com/segments/qct>
<https://medium.com/silicon-reimagined/performance-delivered-a-new-way-8f0f5ed283d5>
[https://podcasts.apple.com/us/podcast/qualcomm-ceo-on-what-he-really-thinks-of-apple/id1091374076?i=1000565773375\)](https://podcasts.apple.com/us/podcast/qualcomm-ceo-on-what-he-really-thinks-of-apple/id1091374076?i=1000565773375)
https://semiengineering.com/knowledge_centers/integrated-circuit/ic-types/processors/central-processing-unit-cpu/
<https://web.archive.org/web/20210115193713/https://nuviainc.com/>
<https://web.archive.org/web/20210316180114/https://nuviainc.com/>
<https://web.archive.org/web/20210422062904/https://nuviainc.com/nuvia-raises-53-million-to-reimagine-silicon-design-for-the-data-center/>
<https://www.arm.com/architecture/cpu>
<https://www.arm.com/glossary/cpu>
<https://www.arm.com/glossary/isa>
<https://www.arm.com/glossary/risc>
<https://www.arm.com/glossary/soc-development>
<https://www.arm.com/partners>
<https://www.cnbc.com/2022/09/01/why-arms-lawsuit-against-qualcomm-is-a-big-deal.html>
<https://www.cnbc.com/2023/09/14/arm-ipo-what-is-risc-v-and-why-does-arm-call-the-rival-product-a-risk.html>
<https://www.currency.me.uk/convert/gbp/usd>
<https://www.digitaltrends.com/computing/what-is-a-cpu/>
<https://www.forbes.com/sites/jonmarkman/2023/12/05/qualcomms-x-elite-crushes-apple-arm-holdings-stocks-surge/?sh=5f330d9e7d04>
<https://www.forbes.com/sites/startwithabang/2018/02/13/chaos-theory-the-butterfly-effect-and-the-computer-glitch-that-started-it-all/?sh=4b460bee69f6>
<https://www.gigabyte.com/Article/server-processors-the-core-of-a-server-s-performance>
<https://www.gigabyte.com/Glossary/cisc>
<https://www.intel.com/content/www/us/en/newsroom/resources/moores-law.html>
<https://www.investopedia.com/articles/markets/012216/worlds-top-10-semiconductor-companies-tsmintc.asp>
<https://www.lenovo.com/us/en/glossary/cpu-core/>
<https://www.pcmag.com/news/qualcomm-snapdragon-x-elite-oryon-chip-tests>
<https://www.pcworld.com/article/1382740/qualcomm-dubs-nuvia-cpu-oryon-on-track-for-2023.html>
<https://www.precedenceresearch.com/microprocessor-market>
<https://www.qualcomm.com/news/releases/2021/01/qualcomm-acquire-nuvia>
<https://www.qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia>
<https://www.qualcomm.com/products>
<https://www.qualcomm.com/snapdragon/overview>
<https://www.techspot.com/article/1856-aiming-for-atoms-chip-manufacturing/>

This list incorporates reference to all documents identified in the footnotes of my report.

EXHIBIT 3

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARM LTD., a U.K. corporation,

Plaintiff,

V.

C.A. No. 22-1146 (MN))

QUALCOMM, INC., a Delaware corporation, QUALCOMM TECHNOLOGIES, INC., a Delaware corporation, and NUVIA, INC., a Delaware corporation

Defendants.

**REPLY EXPERT REPORT OF W. TODD SCHOETTELKOTTE
TING TO REMEDIES FOR DEFENDANTS' BREACH OF CONTRACT**

I DECLARE UNDER PENALTY OF PERJURY THAT THE FOLLOWING IS TRUE AND CORRECT.

W. TODD SCHOETTEL KOTTE

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EXECUTED ON

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I. INTRODUCTION

1. Plaintiff Arm Ltd. ("Arm" or "Plaintiff") has accused Defendants Qualcomm Inc., Qualcomm Technologies, Inc. (collectively, "Qualcomm") and Nuvia, Inc. ("Nuvia") (both collectively, "Defendants") of breaching the Nuvia Architecture License Agreement (the "Nuvia ALA").¹ More specifically, I understand Arm alleges that Nuvia was acquired by Qualcomm without Arm's consent to assignment of the Nuvia ALA, and that Nuvia therefore breached

[REDACTED].² I understand that Arm further alleges [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] As a remedy for Defendants' breach of the Nuvia ALA, I understand that Arm seeks specific performance of [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2. I have been retained as an expert on behalf of Arm to assess and provide testimony regarding whether damages are adequate to compensate Arm for the harm caused by Defendants' breach of the Nuvia ALA. On December 20, 2023, I submitted an expert report

¹ Complaint, August 31, 2022, pp. 16 - 18.

² Complaint, August 31, 2022, pp. 10 - 11; ARM_00111064 - 080 at 078.

³ [REDACTED]

⁴ Complaint, August 31, 2022, pp. 13 - 16; ARM_00111064 - 080 at 077.

⁵ Complaint, August 31, 2022, pp. 16 - 18; ARM_00111064 - 080 at 077. I am informed and understand that Arm is not requesting that any silicon (physical computer chips) made before Qualcomm's acquisition be destroyed, to the extent there are any.

containing my opinions ("Initial Report"). On February 27, 2024, Patrick F. Kennedy, Ph.D. issued his expert report ("Kennedy Report") which includes his rebuttal opinions to my Initial Report. I have been asked to review the Kennedy Report and provide an assessment of Dr. Kennedy's opinions and critiques. As stated in my Initial Report, I was asked to assume that Defendants are found liable for breach of the Nuvia ALA. I offer no opinion regarding liability.

3. My analysis, as set forth in this report, is based on information available to me as of the date of this report.

II. CREDENTIALS AND COMPENSATION

4. I am a Senior Managing Director of J.S. Held LLC ("J.S. Held"), a global consulting firm providing specialized technical, scientific, financial, and advisory services.⁶ I currently serve as the firm's Intellectual Property Practice Lead. My credentials were detailed in my Initial Report. Attached as Schedule 1 to this report is a summary of my professional background and testifying experience, including all publications over the last ten years and all expert testimonies over the last four years.

5. J.S. Held is compensated for my team's involvement in this matter based upon J.S. Held's hourly billing rates. My time is currently billed at a rate of \$695 per hour. J.S. Held's fee is not contingent upon the outcome of this litigation or the opinions that I express.

III. INFORMATION REVIEWED AND CONSIDERED

6. In connection with the preparation of this report, I have reviewed and considered information from a variety of sources, including documents and data produced by the parties; legal documents (and related exhibits); deposition testimony (and related exhibits); and publicly

⁶ J.S. Held and its affiliates and subsidiaries are not a certified public accounting firm and do not provide audit, attest, or any other public accounting services. J.S. Held is not a law firm and does not provide legal advice.

available information, articles, press releases, and Internet websites. The documents and other information that I have reviewed and considered as of the date of this report include those cited throughout this report (including the footnotes) as well as those listed on Schedule 2 attached to this report. I have also held discussions with Arm personnel, including Will Abbey (Executive Vice President & Chief Commercial Officer at Arm), Christine Tran (Senior Director of Legal at Arm), and Paul Williamson (Senior Vice President and General Manager of IoT Line of Business at Arm), as well as Arm's technical expert, Robert Colwell, Ph.D. In addition, I have reviewed and considered the following deposition transcripts (and related exhibits):⁷

Arm Personnel

- Will Abbey, Executive Vice President & Chief Commercial Officer
- Jonathan Armstrong, Head of Brand and Creative Services
- Lynn Couillard, Vice President of Sales
- Richard Grisenthwaite, Executive Vice President & Chief Architect
- Rene Haas, Chief Executive Officer
- Tim Herbert, Vice President of North American Sales (retired)
- Simon Segars, Former Chief Executive Officer
- Karthik Shivashankar, Senior Director of Wearables and Commercial Licensing
- Christine Tran, Senior Director of Legal
- Ian Thornton, Vice President of Investor Relations
- Paul Williamson, Senior Vice President and General Manager of IoT Line of Business
- Mark Werkheiser, Distinguished Engineer

Nuvia Personnel

- Lynn Bos, former Technical Program Manager
- Manu Gulati, former Founder & Senior Vice President of Engineering
- Pradeep Kanapathipillai, former CPU Microarchitecture and RTL Lead
- Nitin Sharma, former CPU Verification Engineer
- Jignesh Trivedi, former CPU Verification Engineer
- Gerard Williams, III, former Founder & Chief Executive Officer

⁷ Since the issuance of my Initial Report, I have received and reviewed the final deposition transcripts of those previously identified as rough transcripts in my Initial Report.

Qualcomm Personnel

- Cristiano Amon, President and Chief Executive Officer
- Ziad Asghar, Senior Vice President of Product Management
- Geeta Balakrishnan, Principal Engineer in the CAD Team
- Ramakrishna Chunduru, former Chief Procurement Officer
- Michael Roberts, Vice President of Global Marketing
- Laura Sand, Senior Vice President, Legal Counsel
- Rohit Singh, Director of Program Management
- James Thompson, Chief Technology Officer

7. In addition to the above, I have also reviewed and considered Dr. Kennedy's report, including the opinions, documents, and other information cited therein. In forming my opinions in this case, I have relied upon the information and documents identified in my Initial Report and this report, and I have also relied upon my more than 25 years of experience and expertise in analyzing remedies for misuse of intellectual property, analyzing the adequacy of damages to compensate for harms relating to the misuse of intellectual property, and assessing and calculating damages adequate to compensate for such harms. My analysis in this case is ongoing. Should additional information, such as documents or data provided by the parties, testimony, whether through expert report or deposition, or rulings issued by the Court, come to my attention after the date of this report, I may find it necessary to update or revise my analysis, opinions, and conclusions. I reserve my right to do so.

IV. LEGAL FRAMEWORK FOR DAMAGES

8. The legal framework for specific performance and damages and my understanding of same are set forth in my Initial Report and are unchanged.

V. SUMMARY OF OPINIONS

9. I have reviewed and considered the Kennedy Report as well as documents and information referenced by Dr. Kennedy. The Kennedy Report, including the documents and

information referenced by Dr. Kennedy, do not change the opinions expressed in my Initial Report.

VI. ASSESSMENT OF THE KENNEDY REPORT

A. Summary

10. The Kennedy Report sets forth numerous assertions in response to my Initial Report. Dr. Kennedy misunderstands or misrepresents the positions and support provided in my Initial Report and fails adequately to support his own opinions.

11. For example, Dr. Kennedy claims that “contrary to Mr. Schoettelkotte’s opinions, assuming a liability finding in favor of Arm, Arm’s damages are readily quantifiable with reasonable certainty, and such damages are adequate to compensate for Arm’s alleged harm if Arm is successful in proving its claims.”⁸ But Dr. Kennedy misrepresents my opinions and fails to support his own opinion, as summarized below.

- Dr. Kennedy fails to recognize that the harms discussed in my Initial Report are prospective and are not harms that have already occurred. As such, his reliance on an alleged lack of past harm and Arm’s current position is irrelevant. Arm’s public statements regarding past events and Arm’s current position, Arm personnel testimony regarding past events, Arm’s past valuations of its Nuvia relationship, and Arm’s past negotiations with Qualcomm do not establish that the prospective harms that I have identified in my Initial Report are unlikely to occur, or that any damages associated with any of those harms can be calculated with reasonable certainty and would be adequate to compensate Arm.
- Dr. Kennedy repeatedly approaches his analysis from the wrong frame of reference. His opinions are focused on the alleged value of Nuvia using Arm’s technology (not the proper analysis), rather than the harms caused by Qualcomm misusing Arm’s technology in an unlicensed manner that undermines the Arm licensing ecosystem.
- Dr. Kennedy does not provide any evidence showing that Arm’s licensing ecosystem would not be substantially harmed if Defendants are found liable for the breach of the Nuvia ALA but are not ordered to discontinue the use and distribution of Arm Technology, Arm Confidential

⁸ Kennedy Report, p. 17.

Information, and any products embodying such technology or information.

- Dr. Kennedy fails to demonstrate that the “available methodologies to quantify damages” that he identifies or any others (alone or in combination) are adequate to calculate damages for any of the harms identified in my Initial Report with reasonable certainty.
- Dr. Kennedy does not identify any specific formula, calculation, or quantitative or qualitative means that (alone or in combination) can be used to calculate the alleged damages associated with any of the harms identified in my Initial Report with reasonable certainty.
- Dr. Kennedy does not calculate, with reasonable certainty or otherwise, alleged damages that (alone or in combination with any other damages) are adequate to compensate Arm for any one or more of the harms identified in my Initial Report, or even identify a specific process and inputs for doing so.
- Dr. Kennedy’s position that damages adequate to compensate Arm can be calculated with reasonable certainty is undermined by the fact that he fails to calculate *any* damage amounts for any one or more of the alleged harms (or any portion(s) of those harms) identified in my Initial Report.
- Dr. Kennedy’s critiques of my Initial Report are unpersuasive, unsupported, and incorrect. Dr. Kennedy mischaracterizes the opinions in my Initial Report and makes numerous incorrect or unsupported statements as a result.

12. Throughout the remainder of this report, I provide my assessment of the discussion and conclusions set forth in the Kennedy Report. Any lack of specific criticism is not meant to imply and is not agreement with Dr. Kennedy’s opinions and conclusions.

B. Arm Public Statements Identified By Dr. Kennedy Do Not Address Prospective Harms

13. Dr. Kennedy’s first rebuttal section reveals Dr. Kennedy’s fundamental misunderstanding of my Initial Report. Specifically, Dr. Kennedy states that “Arm alleges the Defendants’ actions have caused it harm, but Arm’s public statements do not identify the

purported harms that are the subject of Mr. Schoettelkotte's report.”⁹ Further, Dr. Kennedy states that “Mr. Schoettelkotte fails to acknowledge these public statements and nowhere addresses the fact that these statements contradict Mr. Schoettelkotte[’s] allegations of harm.”¹⁰ However, as my Initial Report plainly stated:

[i]n my opinion, if Defendants are found liable for breach of the Nuvia ALA but are not ordered to discontinue the use and distribution of Arm Technology, Arm Confidential Information, and any products embodying such technology or information (including Nuvia-based Cores), then monetary damages are not adequate to compensate Arm for the harm (including future harm) caused by Defendants’ breach of the Nuvia ALA. In my opinion, the monetary damages associated with the harm to Arm (including future harm) caused by Defendants’ breach of the Nuvia ALA cannot be determined with reasonable certainty.

I have considered the harms that Defendants’ breach of the Nuvia ALA may cause to Arm, based on my discussions with Arm employees and review of the record, and described those harms [in my Initial Report].¹¹

14. Given that Arm’s request for specific performance has not been addressed by the Court and denied, the harms discussed in my Initial Report have not yet transpired. As such, the examples cited by Dr. Kennedy focusing on the existence of past harms are inapplicable and do not refute the prospective harms identified in my Initial Report.

15. Dr. Kennedy claims that:

Arm’s public statements since the Defendants’ alleged breach portray increasing royalty revenue, market share, and strength in Arm’s ecosystem. These public statements of financial health and affirming the strength of Arm’s licensing ecosystem—which postdate Defendants’ alleged breach of the Arm / Nuvia ALA—contradict the notion that Arm has been damaged to date, and Arm has not made any public disclosure of the type and extent of the harm suggest by Mr. Schoettelkotte.¹²

The Kennedy Report then references various public statements by Arm—none of which relate to

⁹ Kennedy Report, p. 19.

¹⁰ Kennedy Report, p. 19.

¹¹ Initial Report, p. 32.

¹² Kennedy Report, p. 19.

the harm that would result from a denial of Arm's request for specific performance.¹³

16. Dr. Kennedy concludes that:

[w]hile Mr. Schoettelkotte opines that Arm has and will suffer irreparable harm, Arm's statements to the public and public-facing documents contradict the type and scope of past or prospective future harm claimed by Mr. Schoettelkotte. In its public statements and filings, Arm repeatedly highlights its strong financial performance, robust licensing position, and its plans for future growth and does not mention any significant weaknesses.¹⁴

Dr. Kennedy's conclusion simply highlights his misunderstanding of the harms identified in my Initial Report. Notably, Dr. Kennedy ignores and does not consider Arm's public statements that identified material prospective harms that could result from this dispute. Specifically, Dr. Kennedy did not include in his list public statements in Arm's Form F-1 filing that "[w]e have experienced, and may in the future experience, significant fluctuations in our period-to-period results of operations. Our results may fluctuate and be unpredictable because of a variety of factors, including, among others:" "new litigation or developments in current litigation, including, but not limited to, a lawsuit with Qualcomm and Nuvia...."¹⁵ Further, Arm described the litigation with Qualcomm and indicated that "[o]ur complaint seeks, among other things, specific performance of the Nuvia ALA termination provisions to require Qualcomm and Nuvia to stop using and destroy the relevant Nuvia technology...."¹⁶ Arm also stated that "[w]e can provide no assurances regarding the outcome of the litigation, or how the litigation will affect our relationship with Qualcomm, which is currently a major customer of ours and accounted for 11% of our total revenue for the fiscal year ended March 31, 2023."¹⁷ Arm also indicated that

¹³ Kennedy Report, pp. 20 - 24.

¹⁴ Kennedy Report, p. 24.

¹⁵ ARM_01259705 - 0105 at 735 - 736.

¹⁶ ARM_01259705 - 0105 at 754.

¹⁷ ARM_01259705 - 0105 at 754.

"because litigation and the outcome of regulatory proceedings are inherently unpredictable, our business, results of operations, financial condition and prospects could be materially adversely affected by an unfavorable resolution of one or more of these proceedings, claims, demands or investigations."¹⁸ As such, Dr. Kennedy's claim that "Arm's statements to the public and public-facing documents contradict the type and scope of past or prospective future harm claimed by Mr. Schoettelkotte" is incorrect.¹⁹ A full consideration of Arm's public statements only emphasizes the gravity of the potential harm to Arm considering its recent statements regarding the "strong financial performance, robust licensing position, and its plans for future growth" as described by Dr. Kennedy.

17. The public statements identified by Dr. Kennedy relate to past events and do not address the prospective harms raised in my Initial Report. As such, Dr. Kennedy fails to indicate the relevance of the public statements for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. As such, the public statements cited by Dr. Kennedy do not support his assertion that damages (as an alternative to specific performance) can be calculated with reasonable certainty or would be adequate to compensate Arm.

18. While questioning the veracity of the harms identified in my Initial Report based on Arm's statements in its public filings, Dr. Kennedy also ignores that Qualcomm has also recognized in its public filings many of the same types of prospective threats to its own licensing ecosystem.

19. For example, Qualcomm has also identified the risk of potential re-negotiations of

¹⁸ ARM_01259705 – 0105 at 754.

¹⁹ Kennedy Report, p. 24.

its license agreements as a result of legal proceedings.²⁰ Specifically, Qualcomm has stated that it could be “required to reduce the royalty rates in [its] patent license agreements” as well as changes requiring the modification or renegotiation of its “existing license agreements or pursuing other commercial arrangements.”²¹ Along with the risk of renegotiation, Qualcomm also identified the potential for transaction costs, stating:

[t]o the extent we are required to implement any of these licensing and/or business practices, including by modifying or renegotiating our existing license agreements or pursuing other commercial arrangements, *we would incur additional transaction costs, which may be significant*, we could incur delays in recognizing revenues until license negotiations were completed, and our business, revenues, results of operations, cash flows and financial condition could be harmed.²²

20. Qualcomm also identifies in its own public filings the importance of its R&D as well as the link to its future success. For example, Qualcomm states that “[w]hile we continue to invest significant resources toward advancements primarily in support of 5G-based technologies, we also invest in new and expanded product areas, and industries and applications beyond mobile handsets, but utilizing our existing technical and business expertise and through acquisitions or other strategic transactions.”²³ Qualcomm further stated that “[i]n particular, *our future growth depends in part on new and expanded product areas, and industries and applications beyond mobile handsets..... Accordingly, we intend to continue to make substantial investments in these new and expanded product areas, industries and applications, and in developing related products and technologies.*”²⁴ Qualcomm also highlighted the impact on its future success if its efforts “on new and expanded product areas” are not successful, stating:

²⁰ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, pp. 28 – 29.

²¹ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 29.

²² Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 29 (emphasis added).

²³ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 21.

²⁴ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 21 (emphasis added).

[i]f we are *not successful* in extending our technologies and products into new and expanded areas, and industries and applications beyond mobile handsets, if our new technologies and products are not successful, or if we are not successful in the time frames we anticipate, we may incur significant costs and asset impairments, *our business and revenues may not grow or grow as anticipated, our revenues and margins may be negatively impacted, our stock price may decline and our reputation may be harmed.*²⁵

21. In addition, Qualcomm indicated that a reduction in revenue would hinder its resources for research and development:

[t]he loss of any one of our significant customers, a reduction in the purchase of our products by any of these customers or the cancellation of significant purchases by any of these customers,...would reduce our revenues and could harm our ability to achieve or sustain expected results of operations. A delay of significant purchases, even if only temporary, would reduce our revenues in the period of the delay. *Any such reduction in revenues would also impact our cash resources available for other purposes, such as research and development.*²⁶

22. In addition, Qualcomm recognized that the misuse of its intellectual property could cause it reputational harm as well. Specifically, Qualcomm stated:

[t]he misappropriation, theft, misuse, disclosure, loss or destruction of the technology, intellectual property, or the proprietary, confidential or personal information, of us or our employees, customers, licensees, suppliers or third parties, could harm our competitive position, reduce the value of our investment in research and development and other strategic initiatives, cause us to lose business, *damage our reputation*, subject us to legal or regulatory proceedings, cause us to incur other loss or liability and otherwise adversely affect our business.²⁷

23. Qualcomm's identification of many of the types of prospective threats and harms to its licensing ecosystem that were discussed in my Initial Report further supports the opinions set forth in my Initial Report. This is because Qualcomm has itself acknowledged through public

²⁵ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 21 (emphasis added).

²⁶ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 19 (emphasis added).

²⁷ Qualcomm Incorporated Form 10-K for the fiscal year ended September 24, 2023, p. 26 (emphasis added).

statements that the types of harms which Arm identified are of a similar risk to its own business.

24. Additional public statements and statements from regulators support the importance of Arm's licensing ecosystem and corroborate the harms identified in my Initial Report. For example, a complaint filed by the FTC in 2021 states that:

Arm Processor Technology is at the foundation of many innovative products of our modern digital age, including nearly every smartphone on the market, advanced driver assistance features in recent and upcoming cars, web servers that can provide significantly better cost performance over the most comparable non-Arm servers, and many other examples. In these products, Arm Processor Technology is a critical input. The wide deployment of Arm's Processor Technology has fostered a vibrant ecosystem of software and hardware developers, software, and devices.²⁸

C. Testimony Identified By Dr. Kennedy Does Not Address Prospective Harms

25. Continuing his apparent misunderstanding of my Initial Report, Dr. Kennedy states that “[n]ot only do Arm's public statements indicate that Arm has not been harmed, Arm's witnesses, including those Mr. Schoettelkotte relies on heavily in his report, testified that no actual harm has been experienced by Arm. These statements by Arm's own personnel contradict allegations that Arm has been harmed.”²⁹ Dr. Kennedy goes on to cite and discuss testimony from Arm personnel related to the existence of *past* harm, at the time of their depositions, with Arm's lawsuit pending and the Court yet to rule on specific performance.³⁰ Dr. Kennedy ignores the testimony discussed in my Initial Report that relates to the *future* harms that may flow from a denial of Arm's request for specific performance. Dr. Kennedy's focus on the existence of *past* harm is irrelevant. As discussed in my Initial Report, the harm to Arm is *prospective*, and evidence of that prospective harm is not contradicted or undermined by Arm witness testimony regarding

²⁸ Complaint, In the Matter of Nvidia Corporation, Softbank Group Corporation, and Arm, Ltd., Docket No. 9404, Federal Trade Commission, December 2, 2021, p. 2

(https://www.ftc.gov/system/files/documents/cases/d09404_part_3_complaint_public_version.pdf).

²⁹ Kennedy Report, p. 24.

³⁰ Kennedy Report, pp. 24 - 26.

past harm. Dr. Kennedy also ignores testimony by Arm witnesses, cited below and in my Initial Report, showing the likelihood of the prospective harms to Arm’s licensing ecosystem if specific performance is not ordered in this case.

26. For example, as cited in my Initial Report, Mr. Williamson testified concerning " [REDACTED]

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³¹ Mr. Williamson further testified that Arm's damages are "inestimable,"³² and that:

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27. Mr. Abbey also stated that Qualcomm “

[REDACTED] . Arm intellectual property is in that design, and therefore, it causes brand damage to Arm.”³⁴ Further, Mr. Abbey testified that [REDACTED]

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[REDACTED] .”³⁵ Mr. Williamson testified that “ARM has a reputation of trust with its partners who build technology based on ARM’s technology and services associated with it. Their success is a shared success business with ARM, and trust is an important element of that continuing business practice.”³⁶ Similarly,

³¹ Deposition of Paul Williamson, November 9, 2023, pp. 243 – 244.

³² Deposition of Paul Williamson, November 9, 2023, p. 244.

³³ Deposition of Paul Williamson, November 9, 2023, pp. 244 – 245.

³⁴ Deposition of Will Abbey, October 27, 2023, p. 361.

³⁵ Deposition of Will Abbey, October 27, 2023, p. 361.

³⁶ Deposition of Paul Williamson, November 9, 2023, p. 246.

Mr. Williamson testified that [REDACTED]

[REDACTED].³⁷ Mr. Haas testified that Arm is “[REDACTED]

” and that if it “[REDACTED]

[REDACTED].”³⁸

28. In sum, the testimony identified by Dr. Kennedy largely relates to past events and does not address the prospective harms raised in my Initial Report. Dr. Kennedy fails to indicate the relevance of the testimony for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. As such, the testimony cited by Dr. Kennedy does not support that the damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

D. Dr. Kennedy’s Claim of Purported Benefit of [REDACTED] Launch Is Misguided

29. Dr. Kennedy claims that “[w]hile Arm alleges that the Defendants’ alleged breach has caused harm, Qualcomm’s development efforts and business plans related to the development of custom Arm-compliant CPUs in certain markets will actually benefit Arm. Specifically, Qualcomm’s development efforts of its Arm-compatible [REDACTED] CPU cores ([REDACTED] [REDACTED] will likely lead to increased royalties for Arm. Mr. Schoettelkotte ignores this in his report.”³⁹ Dr. Kennedy subsequently identifies discussion of Qualcomm’s intention to enter the PC market with the [REDACTED]. Dr. Kennedy concludes that “any market share that

³⁷ Deposition of Paul Williamson, November 9, 2023, p. 246.

³⁸ Deposition of Rene Haas, December 12, 2023, pp. 164 – 165.

³⁹ Kennedy Report, p. 26.

Qualcomm gains in the PC market is market share gained for Arm versus x86 alternatives. Further, Qualcomm's sales of [REDACTED] will generate royalties for Arm under the Arm / Qualcomm ALA. Therefore, Qualcomm's development of the [REDACTED] will generate additional royalties for Arm from an increased volume of shipments for the PC market."⁴⁰

30. As discussed in my Initial Report, I understand that [REDACTED]

[REDACTED]⁴¹ Further, I understand that the [REDACTED]

[REDACTED] Dr. Kennedy fails to recognize the significance that [REDACTED]
[REDACTED]. As such, the impending launch of the [REDACTED], should the court not order specific performance, is an event signaling to Arm's licensing ecosystem and the market more broadly that licensees "can do anything [they] want with Arm technology,"⁴³ leading to the harms that are addressed in my Initial Report.

31. In sum, the alleged benefit of [REDACTED] sales identified by Dr. Kennedy does not address the prospective harms raised in my Initial Report. Dr. Kennedy fails to indicate the relevance of this alleged benefit for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm for harms beyond

⁴⁰ Kennedy Report, p. 30.

⁴¹ Correspondence dated 10/26/2023, email from J. Braly to J. Li; Deposition of Mike Roberts, November 28, 2023, pp. 35 - 37.

⁴² ARM_01238999 - 9003; *see also* ARM_01215997 - 6001 at 997 [REDACTED]

QCARM_2417783 [REDACTED]

⁴³ Deposition of Will Abbey, October 27, 2023, p. 361.

any [REDACTED] royalties. That is, even if Arm may receive royalties for [REDACTED], those royalties must be offset by the many-faceted and interconnected types of harm to Arm identified in my Initial Report, which Dr. Kennedy has not calculated, let alone shown would be net positive when considering [REDACTED] royalties (as his opinions implicitly assume). As such, the alleged benefit raised by Dr. Kennedy does not support that the damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

E. Dr. Kennedy's Asserted Examples of Quantified Damages Are Not Applicable

32. Dr. Kennedy states that "Mr. Schoettelkotte contends that damages cannot be quantified, while ignoring the extensive evidence that Arm has expended time and effort quantifying what it sought as adequate compensation."⁴⁴ Dr. Kenndy identifies two instances in which he alleges that Arm has quantified "damages":

- "At the time of the Arm / Nuvia ALA, Arm calculated the expected total contract value ("TCV") of the Arm / Nuvia license agreements[;]"⁴⁵ and
 - "Arm inflated its valuation of the Nuvia ALA during its commercial negotiations with Qualcomm[.]"⁴⁶
- i. **Arm's 2019 Nuvia Total Contract Value ("TCV") Amounts Are Not Applicable**

33. Dr. Kennedy states that he "understand[s] that at the time of the Arm / Nuvia license agreements were being negotiated in 2019, [REDACTED]
[REDACTED]."⁴⁷ Dr. Kennedy goes on to identify several Arm documents regarding the Arm / Nuvia negotiations and Arm's

⁴⁴ Kennedy Report, p. 31.

⁴⁵ Kennedy Report, p. 31.

⁴⁶ Kennedy Report, p. 33.

⁴⁷ Kennedy Report, p. 31.

analysis of the Nuvia relationship in 2019.⁴⁸

34. The 2019 TCV amounts identified by Dr. Kennedy are irrelevant as they do not address the prospective harms raised in my Initial Report from Qualcomm proceeding with unlicensed technology. Dr. Kennedy fails to indicate the relevance of these amounts for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. Indeed, the 2019 TCV amounts were calculated before Nuvia and Qualcomm breached the Nuvia ALA. As such, the 2019 TCV amounts do not support that damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

ii. Arm's 2021 Nuvia TCV Amounts Are Not Applicable

35. Dr. Kennedy states that he "understand[s] that Arm re-evaluated the TCV and expected royalties associated with the Nuvia contract during the period of commercial negotiations with Qualcomm regarding the Nuvia acquisition."⁴⁹ Dr. Kennedy then discusses [REDACTED]

Dr.

Kennedy concludes that "[REDACTED]"

"⁵¹

36. The 2021 TCV amounts identified by Dr. Kennedy are irrelevant as they do not address the prospective harms raised in my Initial Report from the failure to reach a deal and the

⁴⁸ Kennedy Report, pp. 31 - 33.

⁴⁹ Kennedy Report, p. 33.

⁵⁰ Kennedy Report, pp. 33 - 35.

⁵¹ Kennedy Report, p. 35.

impact on Arm from Qualcomm proceeding with unlicensed technology. Dr. Kennedy fails to indicate the relevance of these amounts for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. Further, while describing the 2021 TCV amounts as “inflated,” Dr. Kennedy provides no explanation as to why the amounts are allegedly “inflated.” As such, the 2021 TCV amounts do not support that the damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

iii. Arm’s Negotiations With Qualcomm Are Not Applicable

37. Dr. Kennedy states that “Arm sought [REDACTED]

[REDACTED] and adjustments to [REDACTED] in various market segments. Arm and Qualcomm engaged in extensive back and forth negotiations regarding Arm’s request for compensation in connection with the acquisition.”⁵² Dr. Kennedy then discusses documents regarding negotiations between Arm and Qualcomm that included [REDACTED]
[REDACTED] – all of which would have been related to Qualcomm’s continued use of Arm’s technology in an authorized/licensed manner.⁵³

38. Dr. Kennedy states that “[t]hese commercial negotiations address issues at play in this litigation, and, therefore, demonstrate that Arm has been able to attach a monetary value to the issues in this litigation.”⁵⁴ Dr. Kennedy further states that:

⁵² Kennedy Report, p. 35.

⁵³ Kennedy Report, pp. 35 – 41; ARM_00086285 – 293; QCARM_3537713 – 715; QCARM_3535535 – 536; QCARM_7434227 – 229; ARM_01305785 – 789; ARM_00000017 – 018.

⁵⁴ Kennedy Report, p. 41.

[t]he relevant issue here is not whether Arm's inflated value of the TCV is correct, but instead that Arm was able to calculate a value that it used in negotiations to seek compensation for Qualcomm's alleged use of the Nuvia-based designs, thus illustrating that the value of the Nuvia agreement could be monetized and calculated. Yet, Mr. Schoettelkotte ignores this evidence of valuation.⁵⁵

39. Dr. Kennedy's discussion and conclusion of the amounts from the negotiations demonstrate his misunderstanding of my Initial Report and Arm's claims in this matter. Specifically, each of the offers discussed by Dr. Kennedy pre-date this lawsuit and a denial of Arm's requested specific performance, and thus necessarily exclude "issues in this litigation," including the harm to Arm's licensing program if Qualcomm were permitted to proceed with unlicensed technology. When Arm made offers during negotiations, those amounts reflected an agreement to allow Qualcomm's continued use of Arm Technology pursuant to agreed terms and conditions. Further, had Arm and Qualcomm agreed to resolve their dispute at that time, this would signal to Arm's licensees, prospective licensees, and the market that Arm controlled its technology, could enforce the terms of its license agreements, and that Arm's customers had to respect and compensate Arm for the use of its technology. That is the opposite of the signal that would be publicly sent to Arm's licensees, prospective licensees, and the market if Qualcomm were known to have used Arm's technology in an unauthorized manner but the Court *denied* Arm's request for specific performance. In fact, in an email exchange cited by Dr. Kennedy, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

⁵⁵ Kennedy Report, p. 42.

⁵⁶ QCARM_3537713 - 715 at 713.

[REDACTED] The error of Dr. Kennedy's conclusion is apparent in his claims that the offers address "issues at play in this litigation, and, therefore, demonstrate that Arm has been able to attach a monetary value to the issues in this litigation," or that the "relevant issue" is "that Arm was able to calculate a value that it used in negotiations to seek compensation for Qualcomm's alleged use of the Nuvia-based designs." Because Dr. Kennedy is not analyzing the type of harms set forth in my Initial Report, his statements and conclusions are incorrect. As such, the negotiation amounts would not adequately compensate Arm for those harms. Dr. Kennedy also does not explain how the amounts from the negotiations can be used to calculate damages for the harms identified in my Initial Report with reasonable certainty or would be adequate to compensate Arm.

40. As a final matter, I understand there may be a dispute regarding the admissibility of the documents related to these negotiations. As such, I have included the response above solely to address Dr. Kennedy's discussion of these documents to the extent the Court were to allow any of this information to be considered or addressed by experts in this case.

41. As discussed above, the negotiation amounts identified by Dr. Kennedy are irrelevant as they do not address the prospective harms raised in my Initial Report. Dr. Kennedy fails to indicate the relevance of these amounts for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. As such, the amounts identified by Dr. Kennedy do not support that damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

F. The “Available Methodologies to Quantify Damages” Identified By Dr. Kennedy Are Not Supported Or Applicable

42. Dr. Kennedy states that “Mr. Schoettelkotte ignores that, even if Arm had not attached a value to the issues in this litigation [], there are well established methodologies that could be used to calculate damages[]: (1) quantification of the alleged head start damages, and (2) utilization of previous design transfer fees as a proxy for adequate compensation.”⁵⁷ As discussed below, Dr. Kennedy fails to demonstrate that either of these “available methodologies” address the harms identified in my Initial Report, that they can be used to determine damages for such harms with reasonable certainty, or that they would be adequate to compensate Arm.

i. Dr. Kennedy’s “Head Start” Methodology Is Unsupported And Does Not Address Harms At Issue

43. Dr. Kennedy states that “Arm alleges that Qualcomm received a head start by using certain Arm intellectual property. That is, Qualcomm was allegedly able to save development time and will be able to commercialize its custom CPUs for certain market segments earlier than it otherwise would have. For head start damages in this litigation, this benefit, (i.e., Qualcomm’s head start) would be tied to its alleged improper use of certain technology as opposed to other independent development efforts.”⁵⁸ Dr. Kennedy also states that “[i]n this matter, the financial consequence of Qualcomm’s alleged head start to Arm would be that Qualcomm will shift from higher TLA royalty rates to lower ALA royalty rates earlier than it otherwise would have for certain market segments.”⁵⁹

44. Dr. Kennedy asserts that “[o]nce the head start period is determined, the specific calculation of damages would flow directly from the application of royalty rates to units sold over the appropriate head start period. Further, because Qualcomm intends to release its custom

⁵⁷ Kennedy Report, p. 45.

⁵⁸ Kennedy Report, p. 45.

⁵⁹ Kennedy Report, pp. 47 - 48.

CPU products in various market segments at different times, and because of the dynamics that are unique to each market segment, Qualcomm's alleged head start and Arm's resulting damages, if any, would need to be quantified on a market-by-market basis...."⁶⁰ Dr. Kennedy further claims that "these [head start] damages would provide adequate compensation to Arm as it ties the alleged harm (i.e., lost royalties) back to the specific alleged wrongful conduct (i.e., Defendants' breach and alleged improper use of Arm's intellectual property)."⁶¹

45. Dr. Kennedy is incorrect. Dr. Kennedy approaches damages in this matter as if Arm's claim was one for misappropriation of trade secrets.⁶² However, as indicated at the beginning of my Initial Report and this report, I understand this matter relates to the Defendant's alleged breach of the Nuvia ALA and the impact of the court denying Arm's request for specific performance. As such, Dr. Kennedy is not addressing the relevant harms as identified in my Initial Report.

46. Critically, Dr. Kennedy has not demonstrated that the "head start" methodology described in his report can be used to calculate damages associated with all the harms to Arm addressed in my Initial Report (let alone with reasonable certainty) or would be adequate to compensate Arm for those harms that are distinct from the benefit to Qualcomm from any head start.

47. In conjunction with the fact that Dr. Kennedy's "head start" methodology does not properly address the prospective harms identified in my Initial Report, he fails to include a calculation demonstrating the viability of the methodology he purports to be appropriate. Indeed, Dr. Kennedy claims his "head start" methodology "can be calculated with reasonable

⁶⁰ Kennedy Report, p. 53.

⁶¹ Kennedy Report, pp. 56 - 57.

⁶² Indeed, Dr. Kennedy cites to a treatise entitled "*Commentary on Monetary Remedies in Trade Secret Litigation.*"

certainty.”⁶³ Yet, Dr. Kennedy has not proven that to be the case by employing the methodology he asserts is appropriate. Indeed, public statements made by Mr. Amon indicate that the benefit to Qualcomm and resultant harm to Arm from a head start due to Nuvia is not easily quantifiable. In April 2021, Mr. Amon stated “The NUVIA asset give[s] us a lot of flexibility. You should think about it as having a scalable leading CPU asset to together with the other Qualcomm assets.”⁶⁴ Mr. Amon further stated that “the transition across the board to ARM architecture really create[s] a big expansion opportunity for Qualcomm, and we’re very focused to make that happen with a leading position leveraging the NUVIA CPU. Having said that, I think this asset gives us a lot of flexibility to continue to be expanding to all the different business vectors we’re building in the company.”⁶⁵

48. As discussed above, Dr. Kennedy’s “head start” methodology is irrelevant as it does not address the prospective harms raised in my Initial Report. Dr. Kennedy fails to indicate the relevance of this methodology for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those harms can be determined with reasonable certainty and would adequately compensate Arm. As such, the “head start” methodology identified by Dr. Kennedy does not support that damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

ii. Dr. Kennedy’s “Design Transfer Fee” Methodology Is Unsupported And Does Not Address Harms At Issue

49. Dr. Kennedy states that “[w]hile [he] understand[s] that Qualcomm asserts that a

⁶³ Kennedy Report, p. 56.

⁶⁴ <https://seekingalpha.com/article/4422252-qualcomm-incorporateds-qcom-ceo-steve-mollenkopf-on-q2-2021-results-earnings-call-transcript>.

⁶⁵ <https://seekingalpha.com/article/4422252-qualcomm-incorporateds-qcom-ceo-steve-mollenkopf-on-q2-2021-results-earnings-call-transcript>.

novation, or an assignment of contracts between parties, is not necessary, previous consents and novations, along with associated fees, demonstrate that Arm was willing to [REDACTED]

[REDACTED]." ⁶⁶ Dr. Kennedy

further claims that "Arm's acceptance of a fee in these situations illustrates that Arm was willing to accept monetary compensation in other acquisitions involving Arm licensees."⁶⁷ In addition, Dr. Kennedy concludes that "Arm consents, novates, and in certain instances, receives a fee for such novation. These types of transactions occur in the normal course of Arm's business and do not result in the purported harm that Arm has alleged and that Mr. Schoettelkotte opines on in his report."⁶⁸

50. As with his "head start" assessment, Dr. Kennedy has not demonstrated that the "design transfer fee" methodology can adequately compensate Arm for the types of harms enumerated in my Initial Report. Further, Dr. Kennedy does not demonstrate that the "design transfer free" methodology can compensate for the harms discussed in my Initial Report with reasonable certainty. Specifically, Dr. Kennedy has not shown how his "design transfer fee" methodology addresses the facts of this case. As discussed previously in this report and in my Initial Report, a denial of specific performance would signal to Arm's licensing ecosystem and the market more broadly that licensees "can do anything [they] want with Arm technology,"⁶⁹ leading to the harms that are addressed in my Initial Report. Nothing in the Kennedy Report indicates that Dr. Kennedy's "design transfer fee" methodology would address these harms, in particular because he fails to identify a specific amount or perform an analysis of how said design transfer fee would compensate for the harms identified in my Initial Report.

⁶⁶ Kennedy Report, p. 57.

⁶⁷ Kennedy Report, p. 57.

⁶⁸ Kennedy Report, p. 59.

⁶⁹ Deposition of Will Abbey, October 27, 2023, p. 361.

51. Dr. Kennedy also fails to grasp that the circumstances surrounding the examples he discusses [REDACTED] are not present in the dispute between Arm and the Defendants. Specifically, Dr. Kennedy does not state whether the [REDACTED] [REDACTED] (or other examples) involved any risk of a signal to the market of the enforceability of Arm's license agreements. Rather, the novation amounts reflected an agreement to allow the parties continued use of Arm technology subject to their respective agreements, thereby affirming Arm's control of its licensing program and terms, rather than undermining the program and terms, as Qualcomm's continued use would absent specific performance. Further, the circumstances surrounding the novations did nothing to give the perception that Arm's license agreements are not enforceable. However, in this matter, after Nuvia and Qualcomm's breach, a denial of specific performance would signal to the market that Arm lacks the ability to enforce its license agreements, which would be *opposite* as when the novation payments occurred. As such, those "normal course" events are not applicable to the now public dispute between Arm and the Defendants. Because Dr. Kennedy is not analyzing the type of harms set forth in my Initial Report, his statements and conclusions are incorrect.

52. Finally, I note that Dr. Kennedy does not cite any treatises establishing that the use of "previous design transfer fees" is a "well established methodolog[y] that [can] be used to calculate damages"⁷⁰ in a matter involving a breach of contract.

53. As discussed above, Dr. Kennedy's "design transfer fee" methodology is irrelevant as it does not address the prospective harms raised in my Initial Report. Dr. Kennedy fails to indicate the relevance of this methodology for determining or quantifying the scope of the prospective harms identified in my Initial Report, and whether the damages associated with those

⁷⁰ Kennedy Report, p. 45.

harms can be determined with reasonable certainty and would adequately compensate Arm. As such, Dr. Kennedy's "design transfer fee" methodology does not support that the damages associated with the harms to Arm if its request for specific performance is denied can be calculated with reasonable certainty or would be adequate to compensate Arm.

G. Dr. Kennedy's Various Critiques Of My Initial Report Are Unpersuasive, Unsupported, And Incorrect

54. The remaining portion of the Kennedy Report includes various critiques of sections of my Initial Report. As an initial matter, I note that throughout his report, Dr. Kennedy mischaracterizes the opinions set forth in my Initial Report (and reiterated above in this report).⁷¹ Below I address certain of Mr. Kennedy's assessments. As previously stated in this report, any lack of specific criticism is not meant to imply and is not agreement with Dr. Kennedy's opinions and conclusions.

i. Arm's "Systemic and Idiosyncratic Risks" Do Not Discount Harms From Defendants

55. Dr. Kennedy claims that "Mr. Schoettelkotte conflates Arm's systemic and idiosyncratic risks with risk purportedly associated only with Qualcomm's alleged actions. However, many of Arm's purported harms exist simply due to the nature of Arm's business, and Mr. Schoettelkotte has not differentiated the harms purportedly due to Defendants' alleged wrongful conduct from harms that are due to the nature of Arm's inherent business risks."⁷² Dr. Kennedy makes similar claims throughout his report, such as the examples below.

- "Mr. Schoettelkotte fails to distinguish existing and prospective licensees' possible demand for lower royalties that could occur in the normal course of business, versus the demand for 'more favorable terms' that he identifies as purported harm to Arm."⁷³
- "Based on Arm's own submissions to the SEC, CMA, and FTC, it is evident

⁷¹ See, e.g., Kennedy Report, pp. 62, 70, 73 – 75, 81 – 82, and 92 – 95.

⁷² Kennedy Report, p. 61.

⁷³ Kennedy Report, p. 64.

that Arm encounters attempts by licensees to renegotiate the terms of the existing license agreements in the normal course of business, and such activity occurs separately from Defendants' alleged actions.”⁷⁴

- “Mr. Schoettelkotte’s opinions fail to differentiate between activity and business risks that occur in the normal course of Arm’s business and what he claims is wrongful conduct by Defendants.”⁷⁵
- “This competitive environment is not a purported harm, but rather a general business risk that exists within Arm’s business model, including granting rights under ALAs to Qualcomm and to other manufacturers.”⁷⁶
- “Thus, [REDACTED]

56. Dr. Kennedy fails to recognize that while the prospective harms addressed in my Initial Report are not unlike some of the risks identified by Arm in its public statements, the harms discussed in my Initial Report would be tied to a denial of specific performance and are over and above any “systemic and idiosyncratic” risks Arm has otherwise identified in its public statements (if Qualcomm proceeds with unlicensed technology, it will exacerbate those types of harm, along with imposing others). Further, Dr. Kennedy fails to recognize the impact of the prospective harms identified in my Initial Report because they are related to the actions of one of Arm’s largest licensees flouting Arm’s license agreement (in the event specific performance is denied). Notably, Dr. Kennedy’s above cited examples do not reflect that Arm has addressed the impacts that may result from this matter in its public filings, as discussed previously in this report and my Initial Report.

⁷⁴ Kennedy Report, pp. 65 – 66.

⁷⁵ Kennedy Report, p. 73.

⁷⁶ Kennedy Report, pp. 75 – 76.

⁷⁷ Kennedy Report, p. 93.

ii. Dr. Kennedy Incorrectly Interprets RISC-V Threat

57. Regarding RISC-V, Dr. Kennedy states that “[c]ustomers adopted RISC-V for reasons unrelated to Qualcomm’s alleged actions.”⁷⁸ Dr. Kennedy appears to be making a claim that is not stated in my Initial Report. Nowhere in my Initial Report do I state that customers adopted RISC-V due to Defendants’ alleged actions. Further, Dr. Kennedy asserts that there is a contradiction in my Initial Report.⁷⁹ However, this is yet another misunderstanding (or mischaracterization) on Dr. Kennedy’s part. Dr. Kennedy’s discussion of RISC-V does not negate that RISC-V is a present – yet not a fully-fledged – threat to Arm as discussed in my Initial Report and below.

58. Dr. Kennedy indicates that “Mr. Schoettelkotte does not explain how Qualcomm’s alleged actions influence other licensees and market participants to shift away from Arm-based CPUs to RISC-V-based CPUs. Prior to Qualcomm’s alleged actions, RISC-V already had a presence in the marketplace and some of Arm’s customers and licensees adopted this technology.”⁸⁰ In support of his statement, Dr. Kennedy identifies an [REDACTED]

[REDACTED]

[REDACTED] Based on these documents, Dr. Kennedy concludes that “[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] On this conclusion, Dr. Kennedy and I agree.

Yet, the harm discussed in my Initial Report is related to *prospective* harm that would arise if Arm’s request for specific performance is denied.

⁷⁸ Kennedy Report, p. 79.

⁷⁹ Kennedy Report, pp. 79 – 80.

⁸⁰ Kennedy Report, p. 80.

⁸¹ Kennedy Report, pp. 80 – 81; ARM_01282466 – 575; ARM_00120530 - 536.

⁸² Kennedy Report, pp. 80 -81.

59. As noted in my Initial Report, “the threat of RISC-V is considered to be low because RISC-V is immature compared to Arm and ‘doesn’t have the same level of support.’ RISC-V does not have the ecosystem that has been developed by Arm.”⁸³ Further, as the documents cited by Dr. Kennedy illustrate, [REDACTED]

However, the harms to Arm’s ecosystem discussed in my Initial Report could provide an opportunity for alternatives such as RISC-V to compete with Arm, if Arm were weakened financially or reputationally. For example, the March 2023 Arm document cited by Dr. Kennedy supports this assessment of RISC-V. The document indicated that the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Further, the document indicated that a [REDACTED]

[REDACTED].⁸⁵ Specifically, the document noted that [REDACTED]

[REDACTED]” and “[REDACTED]

[REDACTED] Notably the document indicated that one of Arm’s differentiators from RISC-V included Arm’s brand reputation, stating that “Arm is the trusted supplier of IP to the largest tech firms in the world.”⁸⁷ This highlights the relevance of the harms discussed in my Initial Report, and how those harms discussed could increase the potential risk of competition, including from RISC-V, if specific performance is not ordered.

iii. Dr. Kennedy Misunderstands Arm’s “First Mover Advantage”

60. Dr. Kennedy claims:

⁸³ Initial Report, pp. 43 – 44.

⁸⁴ ARM_00120530 – 536 at 532.

⁸⁵ ARM_00120530 – 536 at 531.

⁸⁶ ARM_00120530 – 536 at 531.

⁸⁷ ARM_00120530 – 536 at 535.

[i]t is unclear what Mr. Schoettelkotte means by a ‘first mover advantage,’ what the benefits of Arm’s mover advantage are, which markets he purports to apply it to, and the basis for Mr. Schoettelkotte’s opinion that Qualcomm has denied Arm any of these purported benefits through Qualcomm’s alleged wrongful conduct. Nor has Mr. Schoettelkotte provided any support showing that Arm in fact has a first mover advantage, however defined.⁸⁸

Further, Dr. Kennedy states that “[a]s a threshold matter, Mr. Schoettelkotte does not define what he considers Arm’s ‘first mover advantage’ to be or how Arm purportedly derives benefit from its purported ‘first mover advantage.’”⁸⁹

61. Dr. Kennedy’s misunderstanding is perplexing. My Initial Report identifies the mobile phone segment numerous times in describing Arm’s first mover advantage and how that advantage might translate to other segments, depending on business plans Arm might choose to pursue (but that might be foreclosed if Qualcomm were permitted to continue using unlicensed technology).⁹⁰ Dr. Kennedy even identifies Arm’s prevalence of “Arm-compatible CPUs, as components of SoCs,” that “are in close to 100% of smartphones.”⁹¹ However, Dr. Kennedy then goes on to discuss his view regarding Arm’s loss of its first mover advantage being “inconsistent with history.”⁹² But given Dr. Kennedy’s misunderstanding of the first mover advantage discussed in my Initial Report, his conclusions do not apply.

iv. Dr. Kennedy’s Assessment Of Arm’s Research and Development Is Unsupported

62. Dr. Kennedy claims that “Arm’s R&D expenses are not as directly tied to revenues as Mr. Schoettelkotte claims them to be.”⁹³ Dr. Kennedy’s assertion is particularly surprising given that Arm states in its public filings that it “architect[s], develop[s], and license[s] high-

⁸⁸ Kennedy Report, p. 81.

⁸⁹ Kennedy Report, p. 83.

⁹⁰ Initial Report, pp. 45 – 47.

⁹¹ Kennedy Report, p. 83.

⁹² Kennedy Report, p. 83.

⁹³ Kennedy Report, p. 92.

performance, low-cost, and energy-efficient CPU products and related technology" (*i.e.*, does not manufacture a product) and that R&D "is at the heart of [its] business and critical to [its] future success."⁹⁴ Indeed, Arm's R&D expenses have outpaced its spending for Selling, General, and Administrative expenses since fiscal year 2019, and has been Arm's largest expense category since fiscal year 2019 at 44% of revenue.⁹⁵ Further, Arm's R&D expenses as a percentage of revenue far exceed those of Qualcomm and the companies included within SIC 3674 (Semiconductors and Related Devices). As shown in Schedule 3, for the period 2019 through 2023, Arm's R&D as a percentage of revenue was 40% while Qualcomm's was 22%. Further, as shown in Schedule 5, the average R&D expense as a percentage of revenue for SIC 3674 was 10%.

63. As such, Dr. Kennedy's claim that Arm's R&D activities are not tied to its revenues is unsupported given the magnitude of Arm's R&D expenses as percentage of revenue and how it compares to other companies in the industry.

v. Dr. Kennedy's Assessment Of Harm To Goodwill Is Incorrect

64. Dr. Kennedy claims that "from a damages perspective, harm to goodwill is a quantitative conclusion based upon the financial impact that an event has on a business's ability to generate future profit."^{96,97} Dr. Kennedy further states that "Arm's public disclosures state that it has identified 'no indication of impairment' to its goodwill over its last three fiscal years."⁹⁸ Finally, Dr. Kennedy states that "Mr. Schoettelkotte presents no analytical or quantitative foundation for the claim that Arm's brand and reputation has been damaged or will be imminently damaged as a result of the Defendant's alleged breach, and his claims are

⁹⁴ ARM_01259705 – 0105 at 712 and 804.

⁹⁵ See Schedules 3 and 4.

⁹⁶ Kennedy Report, p. 94.

⁹⁷ I note that the cited pages to the *Litigation Services Handbook* do not support Dr. Kennedy's statement.

⁹⁸ Kennedy Report, p. 94.

contradicted by Arm's public disclosures in its SEC filings."⁹⁹

65. Due to Dr. Kennedy's misunderstanding of my Initial Report, he has focused on *past* events rather than the *prospective* harm related to Arm's goodwill if Qualcomm were permitted to proceed with unlicensed technology. As such, Dr. Kennedy's stating that Arm has not identified any "indication of impairment" to its goodwill over the last three years is irrelevant. Rather, contrary to Dr. Kennedy's assertion, Arm's public disclosures *have* identified the potential harm due to the dispute at issue. Notably, in its Form F-1 filing, Arm stated "[w]e have experienced, and may in the future experience, significant fluctuations in our period-to-period results of operations. Our results may fluctuate and be unpredictable because of a variety of factors, including, among others:" "new litigation or developments in current litigation, including, but not limited to, a lawsuit with Qualcomm and Nuvia...."¹⁰⁰ Further, Arm described the litigation with Qualcomm and indicated that "[w]e can provide no assurances regarding the outcome of the litigation, or *how the litigation will affect our relationship with Qualcomm*, which is currently a major customer of ours and accounted for 11% of our total revenue for the fiscal year ended March 31, 2023."¹⁰¹ In addition, Arm stated that "our involvement in such litigation *could cause us to incur significant reputational damage in the industry, in our relationship with Qualcomm or in our relationship with other third-party partners.*"¹⁰²

66. Further, despite claiming "harm to goodwill is a quantitative conclusion," Dr. Kennedy identifies no methodology that would measure prospective harm to goodwill. Neither does Dr. Kennedy explain how the "available methodologies" he asserts earlier in his report would include the prospective harm to Arm's goodwill.

⁹⁹ Kennedy Report, p. 95.

¹⁰⁰ ARM_01259705 - 0105 at 735 - 736.

¹⁰¹ ARM_01259705 - 0105 at 754 (emphasis added).

¹⁰² ARM_01259705 - 0105 at 754 (emphasis added).

VII. OTHER ISSUES

67. This report represents my analysis, opinions, and conclusions at this time and is based on information available to me as of the date above. The citations listed in this report are illustrative, and as part of my analysis, I also considered the additional documents and other information listed on Schedule 2. If additional information or testimony becomes available to me, I may revise or supplement my analysis, opinions, and conclusions, and I may modify or supplement my report as necessary. I may testify at trial regarding any related matter raised by the parties after the date of this report if asked to do so by the Court or the parties' attorneys. I may be asked to develop additional schedules or exhibits for trial purposes related to my analysis, opinions, and conclusions. I may also be asked to develop and rely on demonstratives at trial or any pre-trial proceeding. I may also be asked to develop additional schedules or exhibits if asked to do so by the Court or the parties' attorneys, post-trial. This report is intended solely for use in the above-referenced litigation and is not to be used for any other purpose.



W. Todd Schoettelkotte, CPA, CVA

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Certifications

Certified Public Accountant, Texas
Certified Valuation Analyst

Professional Affiliations

State Bar of Texas' Grievance Committee, Committee Member, 2004 – 2009

Federal Bar Association, South Texas Chapter, Treasurer, 2007 – 2015

Institution for Law and Technology Advisory Board Member

Associations

American Institute of Certified Public Accountants

Texas Society of Certified Public Accountants

Licensing Executives Society

National Association of Certified Valuators and Analysts

Education

Master of Accounting
Rice University, Houston, TX

BS Management
Rice University, Houston, TX

W. Todd Schoettelkotte is a Senior Managing Director of Ocean Tomo, a part of J.S. Held LLC, a global consulting firm providing specialized technical, scientific, financial, and advisory services. Mr. Schoettelkotte has more than 25 years of experience in the evaluation and quantification of economic damages arising from patent, copyright and trademark infringement, and trade secret misappropriation disputes. His clients have included numerous Fortune 500 companies in a wide variety of industries including semiconductor, telecommunication, energy, consumer products, life sciences and computers (hardware, software and the internet). Mr. Schoettelkotte has been recognized by Intellectual Asset Management Magazine as one of the leading patent damages experts in the United States. Mr. Schoettelkotte's background is in accounting, finance and economics, and he has a specific, focused understanding of those issues integral to the valuation and management of intellectual property.

Intellectual Property Valuation

Mr. Schoettelkotte has directed numerous valuation projects related to patents, trademarks and trade secrets. A significant portion of his practice is focused on the determination of royalty rates and terms for licensing agreements. Additionally, Mr. Schoettelkotte has conducted numerous studies involving lost profits and unjust enrichment.

In the process of assisting clients in the valuation of intellectual property assets, Mr. Schoettelkotte has participated in the identification and review of business plans, market studies, financial documents and other related information.

Patent, Copyright and Trademark Infringement

Mr. Schoettelkotte has performed market analyses/studies wherein the patented, trademarked or copyrighted product is sold, assessed lost profits stemming from alleged infringements, evaluated the contribution of the patented process/method to the end product and established the economic value of the underlying intellectual property.

Mr. Schoettelkotte is skilled in the application of the Georgia-Pacific factors to the determination of reasonable royalty rates. He has determined reasonable royalty rates within infringement suits on many occasions in numerous industries. Over the course of his career, Mr. Schoettelkotte has reviewed hundreds of license agreements, providing a broad frame of reference for reasonable royalty damages analyses. Mr. Schoettelkotte has testified in federal and state court and arbitration proceedings on matters involving intellectual property valuation, lost profits, reasonable royalty and economic damages issues.

Articles and Presentations

"Intellectual Property Damages," Chicago-Kent College of Law, October 15, 2019

"Damages in Other Areas of Intellectual Property," The University of Arizona IP Conference, March 5, 2018

W. Todd Schoettelkotte

“Impact of Recent Court Cases on ‘Real World’ Royalty Rates,” LES (USA & Canada) Houston Chapter, July 20, 2017

“What is Discoverable and Admissible for Damages, Willfulness and Other Purposes,” Intellectual Property Owners Association, March 21, 2011

“Strategies in Intellectual Property,” Chicago Kent, College of Law, Spring 2004 – 2010

Damages, Part II: “Litigation Strategies” – 15th Annual Advanced Patent Law Institute - University of Texas School of Law, October 28-29, 2010

“IP Damages and Valuation,” Global Intellectual Property Management, Georgetown University Law Center, July 2, 2008

“Keys for Effectively Working with Your Damages Expert Throughout the Litigation Life Cycle,” Houston Bar Association, March 22, 2007

“Advanced Evidence and Discovery – Working With Experts From Start To Finish” – Texas Bar Association, April-May 2006

“Trademarks – Financial Disclosure and Corporate Governance” – International Trademark Association, Emerging Issues in Trademark Law Forum, February 2-3, 2006

“Valuation of IP – A Licensing Perspective” – Lighthouse Seminar Group, IP Licensing Nuts & Bolts, March 3, 2005

“Measuring the Value of Damages in Trademark Infringement Claims” – DuPont’s 18th Annual CLE Intellectual Property Law Seminar, October 12, 2004

“Measuring the Value of Damages in Patent and Trademark Claims” – Houston CPA Society, September 2004

“Measuring Damages in Trademark Infringement and Related Claims in Light of Recent Court Decisions” – The 19th Annual Intellectual Property Law Conference – American Bar Association, April 1, 2004

“Intellectual Property Damages: Patents & Trademarks” – Houston CPA Society “Litigation and Valuation Services Committee,” January 28, 2004

Co-Author: “Accounting for Attorneys” – University of Oregon School of Law, November 12, 2003

“What are the Financial Stakes in Litigation? What are the Costs and the Return on Investment (ROI) That Can Be Expected? The Question of Intangible Returns?” – 2003 Fourth International Conference on Intellectual Property by CNCPI, October 7, 2003, Paris, France

“Current Issues in the Analysis of Reasonable Royalties in Patent Infringement Actions” – 2003 Licensing Executives Society Annual Meeting, September 24, 2003

Co-Author FTI Consulting Training Course: “Calculating Damages in Patent Infringement – A Lost Profits and Reasonable Royalty Case Study,” July 17, 2003



W. Todd Schoettelkotte
Four Year List of Testimony
As of March 2024

CASE DESCRIPTION / TYPE OF TESTIMONY

In the Matter of Certain Semiconductor Devices, and Methods of Manufacturing Same and Products Containing the Same (Respondents); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Hearing

Demaray LLC v. Samsung Electronics Co. Ltd., et al.; U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition, Supplemental Report, Deposition, Second Supplemental Report, Deposition, Trial

Ningde Amperex Technology Limited v. Zhuhai CosMX Battery Co., Ltd., et al.; U.S. District Court, Eastern District of Texas (Marshall), Initial Report, Rebuttal Expert Report, Deposition, Trial

HID Global Corporation v. Vector Flow., et al.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition, Trial

Persawvere, Inc. v. Milwaukee Electric Tool, Corporation; U.S. District Court, District of Delaware (Wilmington), Rebuttal Expert Report, Deposition, Trial

Beacon Navigation GmbH v. Bayerische Motoren Werke AG; BMW of North America, LLC and BMW Manufacturing Co., LLC; U.S. District Court, Southern District of Michigan, Expert Report, Deposition

Plastipak Packaging, Inc. v. Nestlé Waters North America, Inc.; U.S. District Court, Eastern District of Virginia (Alexandria), Opening Expert Report, Rebuttal Expert Report, Supplemental Expert Report, Supplemental Rebuttal Expert Report, Deposition

Olinova Technologies Limited v. ecobee Technologies, ULC d/b/a Ecobee; U.S. District Court, Eastern District of Texas (Marshall), Rebuttal Expert Report, Deposition, Trial

EIS, Inc. v. IntiHealth GER GmbH, et al.; U.S. District Court, District of Delaware, Expert Report, Rebuttal Expert Report, Commercial Success Report, Reply Report, Trial

BlueRadios, Inc. v. Kopin Corporation, Inc.; U.S. District Court, District of Colorado (Denver), Rebuttal Expert Report, Deposition, Supplemental Rebuttal Expert Report, Deposition

Bay Materials, LLC v. 3M Company; U.S. District Court, District of Delaware (Wilmington), Declaration, Deposition, Commercial Success Report, Deposition

Continuous Composites, Inc. v. Markforged, Inc.; U.S. District Court, District of Delaware, Expert Report, Reply Report, Deposition

Fate Therapeutics, Inc., et al. v. Shoreline Biosciences, Inc., et al.; U.S. District Court, Southern District of California (San Diego), Rebuttal Expert Report, Deposition

Delta Air Lines, Inc. v. Marriott International, Inc.; U.S. District Court, Northern District of Georgia (Atlanta), Rebuttal Expert Report, Supplemental Rebuttal Report, Deposition



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CASE DESCRIPTION / TYPE OF TESTIMONY

Textron Innovations Inc. v. SZ DJI Technology Co., Ltd., et al.; U.S. District Court, Western District of Texas (Waco), Expert Report, Deposition, Supplemental Expert Report, Trial

VoIP-Pal.com, Inc. v. Verizon Communications Inc., et al.; U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition

Ragnarok Game, LLC and ESDFOS, LLC v. ZeniMax Media Inc., et al.; Superior Court of the State of California, County of Los Angeles, Central District, Opening Expert Report, Rebuttal Expert Report, Deposition

DivX, LLC v. Harman International Industries, Inc.; New York Supreme Court, New York County, Expert Report, Rebuttal Expert Report, Deposition

Shimon Maimon v. Lockheed Martin Corporation; Judicial Arbitration and Mediation Services, Rebuttal Expert Report, Deposition, Arbitration

WSOU Investments, LLC d/b/a Brazos Licensing and Development v. ZTE Corporation; U.S. District Court, Western District of Texas (Waco), Rebuttal Expert Report, Deposition

Wonderland Switzerland AG v. Evenflo Company, Inc.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition, Supplemental Expert Report, Trial

NNCrystal US Corporation and The Board of Trustees of The University of Arkansas v. Nanosys, Inc.; U.S. District Court, District of Delaware, Expert Report, Reply Report, Deposition

Pavemetrics Systems, Inc. v. Tetra Tech, Inc. and Tetra Tech Tas Inc.; U.S. District Court, Central District of California (Los Angeles), Expert Report, Deposition, Trial

Global Tubing, LLC v. Tenaris Coiled Tubes, LLC and Tenaris, S.A.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Deposition

The Cookie Department, Inc. v. The Hershey Company, One Brands, LLC; U.S. District Court, Northern District of California (Oakland), Rebuttal Expert Report, Deposition

Unirac, Inc. v. EcoFasten Solar, LLC and Esdec, Inc.; U.S. District Court, District of Delaware, Expert Reports, Deposition

In the Matter of Certain Integrated Circuits, Chipsets, and Electronic Devices, and Products Containing the Same (Respondents); U.S. International Trade Commission, Washington, D.C., Rebuttal Expert Report, Deposition



W. Todd Schoettelkotte
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CASE DESCRIPTION / TYPE OF TESTIMONY

In the Matter of Certain High-Density Fiber Optic Equipment and Components Thereof (Complainant); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Witness Statement, Hearing; Enforcement Proceeding - Expert Report, Supplement to the Expert Report, Deposition, 2nd Supplement to the Expert Report, 3rd Supplement to the Expert Report, Witness Statement, 4th Supplement to the Expert Report, Supplement to Witness Statement, Hearing

Blue Mountain Holdings, Ltd., et al. v. Bliss Nutraceuticals LLC, et al.; U.S. District Court, Northern District of Georgia (Atlanta), Expert Report, Deposition

Gibson Brands, Inc. v. Armadillo Distribution Enterprises, Inc. and Concordia Investment Partners, LLC; U.S. District Court, Eastern District of Texas (Sherman), Rebuttal Expert Report, Deposition, Supplemental Rebuttal Expert Report, Trial

Conformis, Inc. v. Medacta USA, Inc. and Medacta International SA; U.S. District Court, District of Delaware, Rebuttal Expert Report, Supplemental Rebuttal Expert Report, Deposition

In the Matter of Certain Silicon Photovoltaic Cells and Modules with Nanostructures, and Products Containing Same (Respondents); U.S. International Trade Commission (Washington, D.C.), Expert Report, Deposition, Witness Statement, Hearing

EcoFactor, Inc. v. Google LLC; U.S. District Court, Western District of Texas (Waco), Expert Report, Deposition, Supplemental Report, Trial, Declaration

G.W. Lisk Company, Inc. v. GITS Manufacturing Company; U.S. District Court, Southern District of Iowa (Central), Expert Report, Reply Report, Deposition

American Eagle Outfitters, Inc. and Retail Royalty Company v. Walmart, Inc.; U.S. District Court, Western District of Pennsylvania (Pittsburgh), Expert Report, Rebuttal Report, Deposition

Simply Wireless, Inc. v. T-Mobile US, Inc., et al.; U.S. District Court, Eastern District of Virginia (Alexandria), Expert Report, Reply Report, Deposition, Sur-Sur Reply Report

Gentex Corporation v. Galvion LTD and Galvion Inc.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition

Kirsch Research and Development, LLC v. DuPont de Nemours, Inc., FT Synthetics, Inc. and Atlas Roofing Corporation; U.S. District Court, Eastern District of Texas (Texarkana), Expert Report, Deposition

Malvern PanAnalytical Inc. v. TA Instruments-Waters LLC and Waters Technologies Corporation; U.S. District Court, District of Delaware (Wilmington), Expert Report, Rebuttal Report, Reply Report, Deposition

Finalrod IP, LLC v. Endurance Lift Solutions, Inc.; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Deposition

Pierce Manufacturing, Inc. and Oshkosh Corporation v. E-One, Inc. and REV Group, Inc.; U.S. District Court, Middle District of Florida (Tampa), Declaration, Expert Report, Deposition, Trial



W. Todd Schoettelkotte
Four Year List of Testimony
As of March 2024

CASE DESCRIPTION / TYPE OF TESTIMONY

Polar Electro Oy v. Suunto Oy, et al.; U.S. District Court, District of Utah (Central), Expert Report, Deposition

Wonderland Switzerland AG v. Evenflo Company, Inc., et al.; U.S. District Court, District of Delaware (Wilmington), Expert Report, Reply Report, Deposition, Trial

Lufkin Industries, Inc. v. International Business Machines Corporation, et al.; 159th Judicial District Court of Angelina County, Texas, Expert Report #1, Supplemental Report #1, Expert Report #2, Supplemental Report #2, Deposition

The Hillman Group, Inc. v. KeyMe, LLC; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Deposition #1, Consolidated Report, Deposition #2

Team Worldwide Corporation v. Academy, LTD d/b/a Academy Sports + Outdoors, et al.; U.S. District Court, Eastern District of Texas (Marshall), Expert Report, Rebuttal Report, Deposition #1, Deposition #2, Supplemental Report

Nevro Corp. v. Boston Scientific Corporation, et al.; U.S. District Court, Northern District of California (San Francisco), Expert Report, Supplemental Report, Deposition, Declaration

Carnegie Institution of Washington, et al. v. Pure Grown Diamonds, Inc., et al.; U.S. District Court, Southern District of New York (Foley Square), Expert Report, Supplemental Report, Deposition

In the Matter of Certain High-Density Fiber Optic Equipment and Components Thereof (Complainant); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Witness Statement, Hearing

Nissei ASB Co. and Nissei ASB Machine, Co., LTD. v. R&D Tool & Engineering Co.; U.S. District Court, Western District of Missouri (Western), Expert Report, Reply Report, Deposition

Jager Pro Incorporated v. Bull Creek Welding and Fabrication, Inc.; U.S. District Court, Eastern District of Arkansas (Central), Expert Report, Deposition

CFA Institute v. American Society of Pension Professionals & Actuaries, et al.; U.S. District Court, Western District of Virginia (Charlottesville), Expert Report, Deposition

Legacy Separators, LLC, et al. v. Halliburton Energy Services, Inc., et al.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Rebuttal Report, Deposition, Supplemental Report, Second Supplemental Report, Deposition #2, Trial

Saracen LLC, Saracen Energy Power Advisors LP, Saracen Energy Advisors LP, collectively d/b/a The Saracen Group of Companies v. Sylvain Ross and Marginal Unit, Inc.; U.S. District Court, Southern District of Texas (Houston), Expert Report, Supplemental Report, Second Supplemental Report, Third Supplemental Report, Revised Third Supplemental Report, Trial

Innovation Sciences, LLC v. HTC Corporation; U.S. District Court, Eastern District of Texas (Sherman), Expert Report, Deposition

In the Matter of Certain Digital Video Receivers, Broadband Gateways, and Related Hardware and Software Components (Respondents); U.S. International Trade Commission, Washington, D.C., Expert Report, Deposition, Hearing

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

ARM_											
Begin	End										
00000003	00000003	00056882	00056894	00095579	00095579	01228039	01228039	01236610	01236612	01239464	01239464
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00000022	00000023	00058159	00058163	00095791	00095791	01228042	01228042	01236618	01236644	01239467	01239469
00000045	00000045	00060458	00060512	00096011	00096011	01228043	01228043	01236645	01236653	01239470	01239470
00000244	00000381	00063607	00063610	00096692	00096715	01228044	01228044	01236654	01236666	01239471	01239471
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00040289	00040306	00087854	00087856	01226630	01226706	01228075	01228075	01239447	01239447	01240308	01240325
00044650	00044692	00087936	00087937	01228026	01228026	01232495	01232512	01239448	01239448	01240326	01240353
00045250	00045253	00088045	00088303	01228027	01228027	01233718	01233718	01239449	01239449	01240354	01240381
00045262	00045264	00088371	00088386	01228028	01228028	01235135	01235137	01239450	01239450	01240382	01240391
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00045393	00045393	00088656	00088684	01228031	01228031	01235149	01235149	01239453	01239453	01240438	01240447
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00056424	00056433	00092784	00092787	01228035	01228035	01236588	01236593	01239460	01239460	01240508	01240526
00056439	00056441	00094543	00094545	01228036	01228036	01236594	01236595	01239461	01239461	01241187	01241187
00056519	00056529	00095370	00095449	01228037	01228037	01236596	01236604	01239462	01239462	01241589	01241589
00056538	00056552	00095578	00095578	01228038	01228038	01236605	01236609	01239463	01239463	01241597	01241598

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

ARM_		ARM_		QCARM_		QCARM_		QCARM_	
Begin	End	Begin	End	Begin	End	Begin	End	Begin	End
01241616	01241620	01271927	01271928	0550518	0550529	3438038	3438074	3536902	3536905
01243410	01243629	01271929	01271953	0557206	0557207	3438075	3438113	3536921	3536933
01243875	01243995	01281879	01281879	0569461	0569494	3438114	3438152	3537376	3537378
01245599	01245617	01282466	01282575	0584330	0584332	3438153	3438193	3537713	3537715
01245618	01245618	01286878	01286998	0591730	0591732	3438194	3438234	3537773	3537776
01245619	01245640	01291202	01291202	0591733	0591736	3438235	3438275	3839896	3839911
01245641	01245672	01292638	01292644	0591737	0591740	3452409	3452442	3920067	3920067
01245673	01245703	01292866	01292866	0591741	0591745	3452662	3452664	7434227	7434227
01245704	01245705	01292867	01292914	0592425	0592431	3452665	3452667	7434228	7434229
01245706	01245719	01294035	01294036	2414807	2414813	3452668	3452672	7505464	7505464
01245720	01245726	01294037	01294038	2417783	2417783	3452720	3452723		
01245727	01245755	01296809	01296825	2423231	2423233	3452805	3452807		
01245756	01245793	01305479	01305479	2424464	2424466	3453808	3453810		
01245794	01245813	01305515	01305515	2424496	2424498	3453866	3453868		
01245814	01245837	01305785	01305789	2424621	2424623	3453870	3453872		
01245838	01245848	01309668	01309669	2425046	2425048	3453873	3453874		
01245849	01245890	01311070	01311084	2425297	2425299	3453875	3453877		
01245891	01245914	01425186	01425186	2426801	2426803	3453879	3453881		
01245915	01245938	01426109	01426156	2426804	2426806	3454302	3454304		
01245939	01245940	01427450	01427492	2426807	2426814	3457104	3457104		
01245941	01245978	01427493	01427522	2426815	2426821	3460229	3460233		
01245979	01246020	01427523	01427537	2426822	2426836	3460451	3460453		
01246021	01246042			2426837	2426852	3474751	3474828		
01246043	01246066	MASA_		2426853	2426855	3519910	3519912		
01246067	01246085	Begin	End	2426856	2426881	3520810	3520812		
01246086	01246111	00001719	00001724	2426882	2426882	3520813	3520815		
01246112	01246134			2426883	2426884	3520816	3520818		
01246135	01246157	QCARM_		2426885	2426887	3520819	3520821		
01246158	01246194	Begin	End	2426888	2426888	3520822	3520825		
01246195	01246197	0002821	0002823	2426889	2426891	3520826	3520829		
01246198	01246224	0002825	0002827	2426892	2426894	3520830	3520834		
01246225	01246227	0275507	0275543	2426895	2426897	3522610	3522611		
01250306	01250306	0275743	0275763	2554114	2554116	3522895	3522902		
01250307	01250307	0337839	0337855	3241389	3241393	3526546	3526553		
01259704	01259704	0337857	0337899	3337797	3337799	3535535	3535535		
01259705	01260105	0338297	0338311	3400486	3400548	3535536	3535536		
01260121	01260391	0338573	0338576	3404294	3404353	3536628	3536629		
01260418	01260686	0343120	0343142	3426632	3426638	3536886	3536888		
01262030	01262366	0343143	0343222	3429791	3429872	3536889	3536891		
01266931	01266990	0343533	0343587	3434164	3434165	3536892	3536894		
01266995	01267070	0343954	0343976	3437962	3438003	3536895	3536897		
01271909	01271926	0363482	0363482	3438004	3438037	3536898	3536901		

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

Legal Documents and Related Exhibits

2022-08-31 - Complaint
 2022-09-30 - Defendants' Answer and Defenses to Plaintiff's Complaint and Jury Demand and Defendants' Counterclaim
 2022-10-26 - Defendants' Answer and Defenses to Plaintiff's Complaint and Jury Demand and Defendants' Amended Counterclaim
 2023-02-27 - Arm Ltd.'s Objections and Responses to Qualcomm's First Set of Interrogatories, Nos. 1-11
 2023-02-27 - Arm Ltd.'s Objections and Responses to Qualcomm's First Set of Requests for Production, Nos. 1-36
 2023-02-27 - Defendants' Responses and Objections to Plaintiff's First Set of Interrogatories, Nos. 1-13
 2023-02-27 - Defendants' Responses and Objections to Plaintiff's First Set of Requests for Production, Nos. 1-51
 2023-04-04 - Arm Ltd.'s First Amended Objections and Responses to Qualcomm's First Set of Requests for Production, Nos. 1-36
 2023-04-26 - Corrected Second Amended Complaint for Willful Patent Infringement
 2023-05-04 - Defendants' Responses and Objections to Plaintiff's Second Set of Requests for Production, Nos. 52-58
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 2023-06-23 - Defendants' First Supplemental Responses and Objections to Plaintiff's First Set of Interrogatories, Nos. 1-4 and 6
 2023-07-14 - Arm Ltd.'s First Objection and Responses to Qualcomm's Third Set of Requests for Production, Nos. 51-54
 2023-08-23 - Defendants' Responses and Objections to Plaintiff's Third Set of Requests for Production, Nos. 59-122
 2023-10-02 - Arm Ltd.'s Objections and Responses to Qualcomm's Second Set of Interrogatories, Nos. 12-19
 2023-10-02 - Plaintiff Arm Ltd.'s Objections and Responses to Defendant Qualcomm's Fourth Set of Requests for Production, Nos. 55-70
 2023-10-20 - Defendants' Responses and Objections to Plaintiff's First Set of Requests for Admission, Nos. 1-30
 2023-10-26 - Defendants' Supplemental and Amended Response and Objections to Plaintiff's First Set of Interrogatories, No. 5
 2023-10-26 - Correspondence Email from J. Braly to J. Li
 2023-10-27 - Defendants' Responses and Objections to Plaintiff's Second Set of Interrogatories
 2023-11-09 - Arm Ltd.'s Objections and Responses to Qualcomm's Third Set of Interrogatories, No. 20
 2023-11-17 - Arm Ltd.'s First Supplemental Objections and Responses to Qualcomm's Second Set of Interrogatories, Nos. 12-19
 2023-11-17 - Arm Ltd.'s Objections and Responses to Qualcomm's Fourth Set of Interrogatories, Nos. 21-25
 2023-11-17 - Arm Ltd.'s Second Supplemental Objections and Responses to Qualcomm's First Set of Interrogatories, Nos. 1-11
 2023-11-17 - Arm Ltd.'s Supplemental Objections and Responses to Qualcomm's Third Set of Interrogatories, No. 20
 2023-11-17 - Defendants' First Supplemental Reponses and Objections to Plaintiff's Second Set of Interrogatories, Nos. 15-16
 2023-11-17 - Defendants' Responses and Objections to Plaintiff's Fourth Set of Requests for Production, No. 123
 2023-11-17 - Plaintiff Arm Ltd.'s Objection and Responses to Defendant Qualcomm's Fifth Set of Requests for Production, Nos. 71-124
 2023-11-17 - Plaintiff Arm Ltd.'s Responses and Objections to Qualcomm's First Requests for Admissions to Plaintiff, Nos. 1-30

Deposition Transcripts and Related Exhibits

2023-09-22 - Rohit Singh	2023-11-02 - Lynn Couillard	2023-11-28 - Jim Thompson	2023-12-08 - Jonathan Armstrong
2023-10-12 - Manu Gulati	2023-11-03 - Gerard Williams	2023-11-28 - Michael Roberts	2023-12-12 - Rene Haas
2023-10-20 - Ramakrishna Chunduru	2023-11-08 - Ziad Asghar	2023-11-29 - Lynn Bos	2023-12-14 - Vivek Agrawal
2023-10-25 - Jignesh Trivedi	2023-11-09 - Paul Williamson	2023-11-30 - Karthik Shivashankar	2023-12-14 - Laura Sand
2023-10-25 - Tim Herbert	2023-11-15 - Christiano Amon	2023-12-01 - Pradeep Kanapathipillai	2023-12-19 - Christine Tran
2023-10-27 - Nitin Sharma	2023-11-15 - Richard Grisenthwaite	2023-12-07 - Mark Werkheiser	2023-12-20 - Ian Thornton
2023-10-27 - Will Abbey	2023-11-16 - Simon Segars	2023-12-08 - Geeta Balakrishnan	

Expert Reports

2024-02-27 - Expert Report of Patrick F. Kennedy, PhD.

Publicly Available Information/Other

Ampere's Second Mot. for Protective Order
 Arm Holdings plc Amendment No. 2 to Form F-1, September 5, 2023
 Arm Holdings plc Form 424(b)(4), September 14, 2023

Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

Schedule 2

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Arm Holdings plc FQ2 2024 Earnings Call Transcripts, November 8, 2023
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 Arm Holdings plc FQ3 2024 Results Presentation, February 7, 2024
 Arm Holdings plc Q2 FY 2024 Key Financial Data
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Arm Ltd. v. Qualcomm, Inc., Qualcomm Technologies, Inc. and Nuvia, Inc.
Documents and Other Information Considered

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Performance from Architecture: Comparing a RISC and a CICS with Similar Hardware Organization, Bhandarkar & Clark

Qualcomm Inc. Form 10-K for the fiscal year ended September 24, 2023

Qualcomm Inc. Form 10-K for the fiscal year ended September 26, 2021

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Qualcomm Incorporated, Form 10-K for fiscal year ended September 24, 2023

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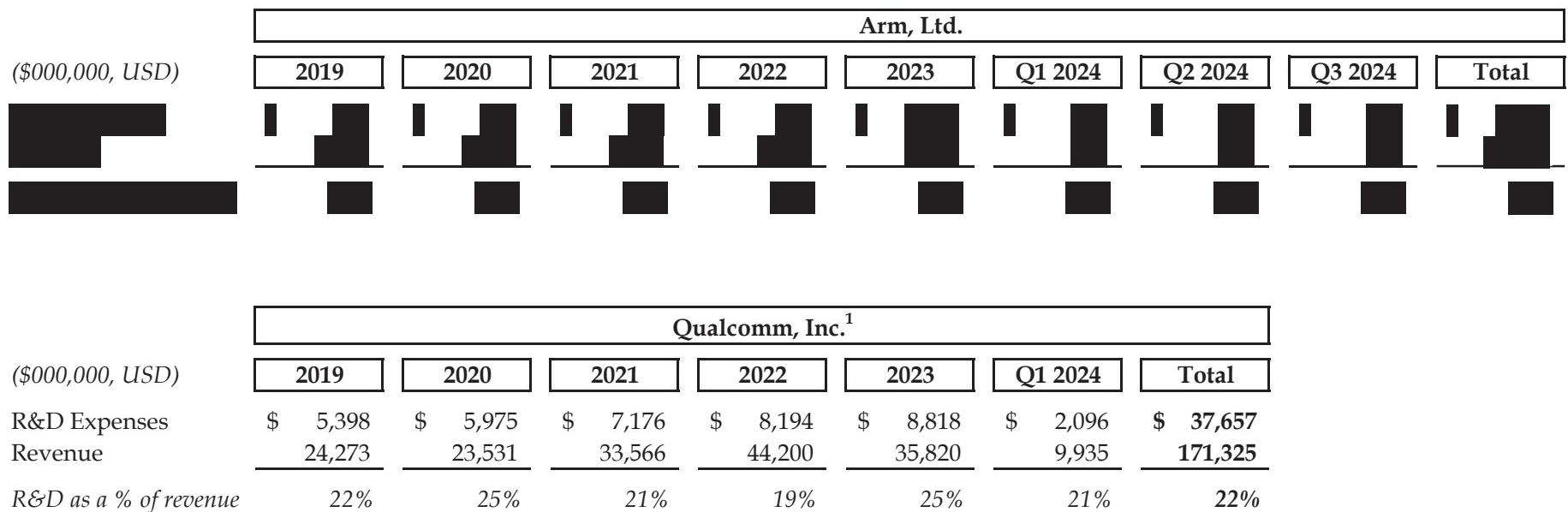
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Arm and Qualcomm R&D as Percent of Revenue
FY2019 - Q3 FY2024



Note:

[1] Qualcomm, Inc. fiscal year ends the last Sunday in September. See, Qualcomm, Inc. 10-Q, December 24, 2023, p. 11.

Sources:

Schedule 4.

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 Qualcomm, Inc. 10-Q, December 24, 2023, p. 19.

Arm, Ltd. Consolidated Income Statement¹
FY2019 - Q3 FY2024

(\$000, USD)	2019	2020	2021	2022	2023	Q1 2024	Q2 2024	Q3 2024	Total
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Note:

[1] Arm, Ltd. fiscal year is from April 1 to March 31. See, ARM_01259705-105 at 709.

Sources:

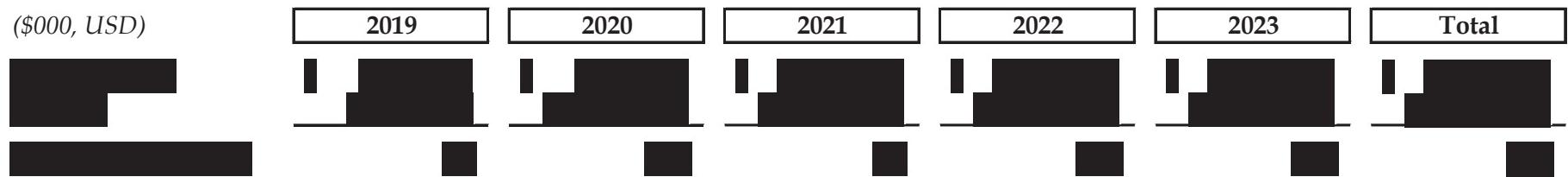
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Total R&D Expenses and Revenue for SIC 3674¹
FY2019 - FY2023



Note:

[1] S&P Capital IQ data obtained using the following criteria: SIC Code 3674, Revenues >0, R&D Expense >0, including latest FY-4. The amounts above include 1,011 companies, and exclude Arm, Ltd. and Qualcomm, Inc.

Source:

S&P Capital IQ.

EXHIBIT 4

ATTORNEYS EYES ONLY

Page 1

1

2 IN THE UNITED STATES DISTRICT COURT
3 FOR THE DISTRICT OF DELAWARE
4 C.A. No. 22-1146 (MN)

5

ARM LTD.,

6

Plaintiff,

7

- against -

8

QUALCOMM INC., QUALCOMM TECHNOLOGIES,
INC., AND NUVIA, INC.,

9

Defendants.

10

-----x

11

July 2, 2024

12

9:07 a.m.

13

CONFIDENTIAL

14

ATTORNEYS' EYES ONLY

15

16 VIDEOTAPED DEPOSITION of WILLIAM TODD
17 SCHOETTELKOTTE, held at the offices of
18 MORRISON & FOERSTER LLP, located at 250 West
19 55th Street, New York, New York 10019, before
20 Anthony Giarro, a Registered Professional
21 Reporter, a Certified Realtime Reporter and a
22 Notary Public of the State of New York.

23

24

25

ATTORNEYS EYES ONLY

1 2 APPEARANCES : 3 4 5 MORRISON FOERSTER LLP 6 Attorneys for Plaintiff 7 250 West 55th Street 8 New York, New York 10019 9 BY: KYLE W.K. MOONEY, ESQ. 10 kmooney@mofo.com 11 KYLE D. FRIEDLAND, ESQ. 12 kfriedland@mofo.com 13 14 MORRISON FOERSTER LLP 15 Attorneys for Plaintiff 16 600 Brickell Avenue, Suite 1560 17 Miami, Florida 33131 18 BY: MICHAEL DeSTEFANO, ESQ. 19 mdestefano@mofo.com 20 (via Zoom) 21 22 23 24 25	Page 2	Page 4
		<p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL</p> <p>2 THE VIDEOGRAPHER: Good</p> <p>3 morning. We are going on the record</p> <p>4 at 9:07 a.m. on July 2nd, 2024.</p> <p>5 Please note that the microphones are</p> <p>6 sensitive and may pick up whispering</p> <p>7 and private conversations. Please</p> <p>8 mute your phones at this time and</p> <p>9 place them away from the microphones</p> <p>10 as they can interfere with the audio.</p> <p>11 Audio and video recording will</p> <p>12 continue to take place unless all</p> <p>13 parties agree to go off the record.</p> <p>14 This is Media Unit 1 of the</p> <p>15 video-recorded deposition of William</p> <p>16 Todd Schoettelkotte in the matter of</p> <p>17 ARM Ltd., plaintiff, versus Qualcomm</p> <p>18 Inc., Qualcomm Technologies, Inc. and</p> <p>19 Nuvia, Inc., defendants, C.A. No.</p> <p>20 22-1146 (MN), filed in The United</p> <p>21 States District Court for the</p> <p>22 District of Delaware.</p> <p>23 The location of this</p> <p>24 deposition is Morrison & Foerster</p> <p>25 LLP, 250 West 55th Street, York, New</p>
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<p>1 2 APPEARANCES (Cont.): 3 4 5 PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP 6 Attorneys for Defendants 7 1285 Avenue of the Americas 8 New York, New York 10019 9 BY: SAMANTHA MEHRING, ESQ. 10 smehring@paulweiss.com 11 12 PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP 13 Attorneys for Defendants 14 2001 K Street, N.W. 15 Washington, D.C. 20006 16 17 BY: WILLIAM A. ISAACSON, ESQ. 18 wisaacson@paulweiss.com 19 20 21 ALSO PRESENT: 22 PHIL GLAUBERSON, Videographer 23 JACOB SCHULZ, Paul Weiss, 24 Summer Associate 25 CHRISTINA PORTUALLO, Morrison & Foerster, Summer Associate</p>		<p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL</p> <p>2 York.</p> <p>3 My name is Phil Glauberson</p> <p>4 representing Veritext. And I am the</p> <p>5 videographer. The court reporter is</p> <p>6 Anthony Giarro from Veritext.</p> <p>7 I am not authorized to</p> <p>8 administer an oath, I am not related</p> <p>9 to any party in this action, nor am I</p> <p>10 financially interested in the</p> <p>11 outcome.</p> <p>12 All appearances will be</p> <p>13 noted on the stenographic record.</p> <p>14 Will the court reporter</p> <p>15 please swear in the witness.</p> <p>16 WILLIAM TODD</p> <p>17 SCHOETTELKOTTE, after having</p> <p>18 first been duly sworn by a Notary Public of</p> <p>19 the State of New York, was examined and</p> <p>20 testified as follows:</p> <p>21 EXAMINATION BY</p> <p>22 MR. ISAACSON:</p> <p>23 Q Mr. Schoettelkotte, I'm Bill</p> <p>24 Isaacson. I'll be asking you questions.</p> <p>25 Today for convenience, we've</p>

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<p style="text-align: right;">Page 22</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 behalf of ARM to assess and provide 3 testimony regarding whether damages are 4 adequate to compensate ARM for the harm 5 caused by defendants' breach of the Nuvia 6 ALA."</p> <p>7 When you used the term harm, 8 does that have any specialized meaning 9 for you?</p> <p>10 A I don't understand the 11 question.</p> <p>12 Q So you have a background as 13 a damages expert; correct?</p> <p>14 A That's correct.</p> <p>15 Q If I hit myself, I might 16 harm myself. It's got a generalized 17 meaning.</p> <p>18 Does it have any specialized 19 meaning to you as a damages expert when 20 you use the term harm?</p> <p>21 A If I'm being honest, I still 22 don't really understand your question, if 23 you could rephrase it.</p> <p>24 Q Are you giving opinions in 25 this case as an expert on whether ARM was</p>	<p style="text-align: right;">Page 24</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Qualcomm committed a breach of the Nuvia 3 ALA [REDACTED] 4 A Well, I'm assuming that 5 Qualcomm and Nuvia are largely one 6 enterprise at this point. Again, from a 7 legal perspective, a little bit outside 8 my purview. But I'm assuming that they 9 are one in the same right now, given that 10 Qualcomm purchased Nuvia. 11 And my understanding is, is 12 that there is an argument in the case 13 that when that acquisition occurred, 14 there [REDACTED] [REDACTED] [REDACTED] And I 18 understand that it's ARM's position that 19 those steps were not taken, either at all 20 or in the proper fashion. 21 And as a result of that, 22 there is a series of harms that are 23 likely to occur, again based upon, Number 24 One, my discussions with ARM personnel 25 but, Two, my review of the record</p>
<p style="text-align: right;">Page 23</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 harmed by the alleged breach of contract 3 in this case?</p> <p>4 A In large part, my 5 understanding of the likely harms to ARM 6 are based upon my discussions with ARM 7 personnel and my review of the documents 8 and information produced in this case and 9 a general understanding of the construct 10 of calculating damages for particular 11 economic harms over the course of many 12 years of evaluating economic damages.</p> <p>13 Q [REDACTED] [REDACTED] [REDACTED].</p> <p>17 Q And you're offering no 18 opinions on liability in this case; 19 correct?</p> <p>20 A I'm not.</p> <p>21 Q So you're assuming that 22 Nuvia committed a breach of the Nuvia ALA 23 [REDACTED] [REDACTED]</p> <p>25 Q And are you assuming that</p>	<p style="text-align: right;">Page 25</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 evidence in this case.</p> <p>3 Q You're not here to give 4 opinions about the contract or the law; 5 correct?</p> <p>6 A That's correct.</p> <p>7 Q And so I'm just talking 8 about your assumptions coming into this 9 and not your opinions.</p> <p>10 You do have the 11 understanding that Qualcomm was not a 12 party to the Nuvia ALA; correct?</p> <p>13 A That's correct.</p> <p>14 Q But your understanding is 15 that Qualcomm and Nuvia for purposes of 16 that contract are one in the same?</p> <p>17 MR. MOONEY: Objection, 18 form.</p> <p>19 A I thought I was pretty 20 clear. Maybe I wasn't. Number One, I'm 21 not offering a legal opinion as to 22 whether they are one in the same. What I 23 was endeavoring to communicate was I 24 understand that when Qualcomm buys Nuvia, 25 Nuvia becomes, essentially, part of</p>

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<p style="text-align: right;">Page 26</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Qualcomm. Again, I'm not holding that 3 out as a legal perspective. I'm not 4 offering a legal opinion on that. 5 But I understand now that 6 Qualcomm, which now owns and controls 7 Nuvia, has -- has some decisions to make 8 on whether it will or it will not adhere 9 to the Nuvia contract. And I believe 10 there's a dispute as to whether Qualcomm 11 now with Nuvia as part of the enterprise 12 properly adhered to the contract. 13 Whether or not this is a Nuvia compliant 14 issue or a Qualcomm compliant issue or a 15 combined entity issue, again, that's well 16 beyond my purview as a non-legal person. 17 Q And in your report, you used 18 the term, Nuvia ALA [REDACTED] [REDACTED] 20 Do you have an understanding 21 of what [REDACTED] of the Nuvia ALA 22 you're referring to when you refer to the 23 [REDACTED] ? 24 A Well, I'm happy to look at 25 the contract. I haven't committed it to</p>	<p style="text-align: right;">Page 28</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 termination provisions are. 3 A So in paragraph 42 of my 4 report, I say, "ARM's TLAs and ALAs also 5 include [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 14 I cite to Footnote [REDACTED] which 15 is a discussion with Paul Williamson and 16 Christine Tran. For example, 17 [REDACTED] of the Nuvia ALA includes 18 the following [REDACTED]. And 19 I cite to [REDACTED] by citing to Footnote 102, 20 which is document ending in 080, 21 beginning in 064. And I cite a section 22 of the agreement, which is [REDACTED], 23 which I understand to be a discussion of 24 the [REDACTED] of this ALA by 25 ARM in accordance with [REDACTED].</p>
<p style="text-align: right;">Page 27</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 memory. 3 Q Sure. 4 MR. ISAACSON: Why don't we 5 mark this [REDACTED] 6 (The above-referred-to 7 document was marked as [REDACTED] 8 for identification, as of this date.) 9 A And I'm sorry. You 10 mentioned Nuvia [REDACTED] 11 Q Yes. You used the term 12 Nuvia ALA [REDACTED] in 13 paragraph 10 of your report. 14 A Thank you. 15 MR. MOONEY: Do you have the 16 rest of this agreement or no? 17 MR. ISAACSON: Not 18 currently. 19 MR. MOONEY: Just for the 20 record, so [REDACTED] 21 It doesn't have the annex to the 22 amendments. That's fine. 23 Q And I give this to you, just 24 in case this helps you, if you tell me 25 what your understanding of the Nuvia ALA</p>	<p style="text-align: right;">Page 29</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q So when you refer in 3 paragraph 10 to the Nuvia ALA [REDACTED] [REDACTED] you're referring to your 5 discussion in paragraph 42 of your 6 report; is that correct? 7 A Well, you said paragraph 10. 8 I might just be not following you. 9 Q In paragraph 10, you used 10 the term Nuvia ALA [REDACTED] [REDACTED] 12 A And you said paragraph 10 of 13 my report? 14 Q Yes. 15 You see, "I have assumed a 16 breach of the Nuvia ALA [REDACTED] [REDACTED] It's at the end of that 18 very short paragraph 10. 19 A I see that. 20 Q So I'm just trying to get an 21 understanding of when you say you've 22 assumed a breach of the Nuvia ALA 23 [REDACTED] [REDACTED] [REDACTED]</p>

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<p style="text-align: right;">Page 30</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that you just referenced? 3 A That's correct. 4 Q And are you assuming a 5 single breach of those [REDACTED] 6 multiple breaches of those [REDACTED] 7 MR. MOONEY: Objection to 8 form. 9 A I think I'm assuming there's 10 a breach as to the legal argument. 11 Regarding whether there is more than one 12 breach, I would say that sounds like a 13 legal interpretation which I'm maybe not 14 necessarily comfortable giving. 15 My understanding is that 16 there is a breach of [REDACTED], which 17 is the section that we've been referring 18 to, as to whether there's multiple 19 breaches. I don't know if I have an 20 opinion on that. 21 Q You've given the opinion 22 that if defendants are found liable for 23 breach of the Nuvia ALA, but are not 24 ordered to discontinue the use and 25 distribution of ARM technology, ARM</p>	<p style="text-align: right;">Page 32</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A Well, my understanding is, 3 is that -- and again, this is as a 4 layman, not as an attorney -- but my 5 understanding is, is that [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 12 And that consent would be a 13 consent that would either allow them to 14 use the technology in some appropriate 15 manner defined by the contract. Or to 16 the extent that it's not defined or 17 authorized by the contract, my 18 understanding is, is that there are 19 [REDACTED]. And once the 20 contract is terminated, [REDACTED] [REDACTED] [REDACTED] 23 Q So when you're using the 24 term, if defendants are found liable for 25 breach of the Nuvia ALA, would that</p>
<p style="text-align: right;">Page 31</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 confidential information, any products 3 embodying such technology and 4 information, then monetary damages are 5 not adequate to compensate ARM for the 6 harm, including future harm, caused by 7 defendants' breach of the Nuvia ALA. 8 When you're giving that 9 opinion, are you referring to any 10 specific conduct that caused that breach? 11 A Can you point me to where 12 you're reading from? 13 Q Sure. Paragraph 14 of your 14 report. 15 A I'm sorry. If I could just 16 take a look at the paragraph real quick. 17 Q Sure. 18 A Thank you. Okay. Thank 19 you. 20 Q So when you say if 21 defendants are found liable for breach, 22 and you go on to talk about the rest of 23 your opinion, are you referring to any 24 specific alleged breached or conduct or 25 it's just any breach of the Nuvia ALA?</p>	<p style="text-align: right;">Page 33</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 include any use of Nuvia confidential 3 information by Qualcomm where Qualcomm 4 did not have the right to use that? 5 MR. MOONEY: Objection, 6 form. 7 A Again, it sounds like a 8 legal question. 9 Q And I'm not asking you a 10 legal question. So let me make this 11 clear. 12 You've given an opinion that 13 if defendants are found liable for breach 14 of the Nuvia ALA, then you have a certain 15 opinion that follows from that about how 16 monetary damages in certain circumstances 17 would not be adequate to compensate ARM. 18 I'm trying to understand what you mean by 19 a breach of the Nuvia ALA that 20 triggers -- that's the premise for your 21 opinion. 22 Is it any breach of the 23 Nuvia ALA where Qualcomm does not have 24 the right to use Nuvia confidential 25 information?</p>

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<p style="text-align: right;">Page 34</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 MR. MOONEY: Objection, 3 form. 4 A That seems like a different 5 question, sir, completely different 6 question than the first one you asked. 7 And I appreciate you being clear. But 8 perhaps I didn't understand where you're 9 going. 10 Q I'm trying to help you to 11 explain where I'm going. 12 MR. MOONEY: Counsel, if he 13 could finish his answer. Thanks. 14 A Maybe we don't talk over one 15 another. 16 So I have guided you to 17 where in my report, I was referring to. 18 And then you mentioned paragraph 10. Now 19 you've moved to paragraph 14. And I'm 20 not sure I understand the question that 21 you're asking. 22 So if you could -- you're 23 welcome to repeat the question. But that 24 may not provide the clarity I'm looking 25 for. But if you could maybe ask the</p>	<p style="text-align: right;">Page 36</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that ARM's position is Qualcomm failed to 3 adhere to what Qualcomm was -- excuse 4 me -- Qualcomm failed to adhere to what 5 ARM was requesting of Qualcomm under the 6 contract. And as a result, ARM 7 terminated the contract, which then, as I 8 understand from a non-legal perspective, 9 brought in the concept of the next steps, 10 whether they'd be negotiations or 11 specific performance or what have you, 12 which finds us here. 13 Q So when you referred to a 14 breach of the Nuvia ALA stemming from 15 [REDACTED] [REDACTED] [REDACTED] do you have any 19 understanding of what that confidential 20 information is or why it's confidential? 21 MR. MOONEY: Objection to 22 form. 23 A Well, again, this sounds 24 like a legal question again or certainly 25 defining a legal nature of information or</p>
<p style="text-align: right;">Page 35</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 question again, I would appreciate it. 3 Q Let me try to put it this 4 way. 5 When you say if defendants 6 are liable for the breach of the Nuvia 7 ALA, is that any breach of the Nuvia ALA 8 or is there some type of breach of the 9 Nuvia ALA that you were referring to? 10 A Well, I am understanding as 11 a non-legal person that the breach of the 12 ALA here would be a breach of continuing 13 to use ARM confidential information as 14 part of an agreement that was subject to 15 termination based upon the actions of 16 Qualcomm and Nuvia once Qualcomm acquired 17 Nuvia. 18 And I believe there is or 19 are references in the record to some 20 correspondence between ARM and Qualcomm 21 after Qualcomm notified ARM that they had 22 acquired Nuvia, letting Qualcomm know of 23 what was required of them in ARM's mind 24 moving forward. 25 And it's my understanding</p>	<p style="text-align: right;">Page 37</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 confidential information. 3 But in general, my 4 understanding is, as part of the 5 contract, ARM contract with Nuvia, ARM 6 and Nuvia are working together, sharing 7 confidential information in order to 8 bring a product to market. 9 Ultimately when Qualcomm 10 acquires Nuvia, that then would trigger 11 at least some discussion or some activity 12 amongst the parties, whereby Qualcomm and 13 Nuvia would need to reach some form of 14 agreement in order for the parties to 15 move forward. 16 I understand that that 17 agreement was not reached. And it was 18 not reached because in ARM's mind, the 19 confidential information that it had 20 shared underneath the ALA and the TLA 21 with Nuvia was now being shared with 22 Qualcomm in a manner which is 23 inconsistent with the agreement between 24 Nuvia and ARM. 25 Q And then in that</p>

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<p style="text-align: right;">Page 38</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 paragraph 14, in the second-to-last line, 3 you referred to harm, including future 4 harm. You see that?</p> <p>5 A Yes.</p> <p>6 Q And you also referred to 7 harm, including future harm, in 8 paragraph 15 in the first line, 9 continuing on to the second line. You 10 see that?</p> <p>11 A I do.</p> <p>12 Q So when you referred to harm 13 being caused by defendants' alleged 14 breach of the Nuvia ALA, are you assuming 15 there was such a harm?</p> <p>16 A It's my understanding, based 17 upon my discussions with ARM personnel 18 and review of documents in this case, 19 certainly, my review of documents in this 20 case and skills and experience allow me 21 the ability to identify likely harms that 22 would occur due to the breach.</p> <p>23 And so I think it's a 24 combination of review of deposition 25 testimony, review of documents,</p>	<p style="text-align: right;">Page 40</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that foundation, that there was harm in 3 this case or whether you're simply 4 referring to those, would be the sources 5 for finding any harm in this case.</p> <p>6 A Those would be the sources 7 that I'm aware of that would be 8 associated with identifying the harm, 9 including future harm, associated with 10 defendants' breach of the Nuvia ALA.</p> <p>11 Q Right.</p> <p>12 So you listed the sources by 13 which harm, including future harm, would 14 be found in this case to your 15 understanding.</p> <p>16 But you're not giving your 17 own independent expert opinion about 18 whether ARM was harmed in this case; is 19 that correct?</p> <p>20 A I am -- I would say it a 21 little bit differently. And, again, I 22 tried to say this now twice. So 23 apparently, I'm not doing a good enough 24 job.</p> <p>25 I've identified that there</p>
<p style="text-align: right;">Page 39</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 discussion with ARM personnel, as well as 3 my experience in assessing harms and 4 assessing damages over the course of my 5 career.</p> <p>6 Q Just so I understand it, do 7 you consider yourself to be giving an 8 expert opinion in this case that ARM was 9 harmed by Qualcomm's alleged defendants' 10 breach of the Nuvia ALA?</p> <p>11 A So, again, I would refer you 12 back to my last answer. The harms that I 13 am referring to are the harms that I 14 understand based upon my discussions with 15 ARM personnel, my review of their 16 deposition testimony, my review of 17 documents in this case, certainly, my 18 review of various damages methodologies, 19 as it relates to those harms, which were 20 identified, but also my skills and 21 experience in assessing damages 22 throughout the course of my career.</p> <p>23 Q So I can't tell from that 24 answer whether you're saying you are 25 giving an expert opinion, yes, based on</p>	<p style="text-align: right;">Page 41</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 is likely harm in this case, based upon 3 my discussions with ARM personnel, my 4 review of the documents produced in this 5 case, the deposition testimony.</p> <p>6 In addition, I've also 7 looked at those harms and assessed them 8 from a damages standpoint to determine 9 whether, if any, damages would either be 10 adequate to compensate or possible to 11 calculate and are these the types of 12 harms that I would anticipate or expect 13 in a case like this.</p> <p>14 But as to identifying what 15 those harms are, I relied upon my 16 discussions with Nuvia personnel, the 17 documents produced in this case, 18 deposition testimony as I said.</p> <p>19 Q In paragraph 3, you 20 say, "I've also been asked to assess and 21 provide testimony regarding the damages 22 associated with ARM's claim for trademark 23 infringement."</p> <p>24 What trademarks are you 25 referring to there?</p>

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<p style="text-align: right;">Page 42</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A I believe it's the ARM 3 trademark. 4 Q And then at paragraph 141, 5 you say in the second sentence, "I am 6 informed and understand that ARM is not 7 aware of any trademark infringements by 8 defendants to date." 9 And you say, "I may be asked 10 to opine on potential damages associated 11 with trademark infringement, if any such 12 infringement is alleged to have occurred 13 before trial of this matter." 14 So am I correct that as of 15 this date, you do not have any opinions 16 that ARM has incurred any damages for 17 violation of trademarks? 18 A I believe that is correct. 19 Q And when you say you were 20 informed and understand that ARM's not 21 aware of any trademark infringement by 22 defendants to date, who informed you of 23 that? 24 A I reviewed the second 25 supplemental objections and responses to</p>	<p style="text-align: right;">Page 44</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 in accounting; is that right? 3 A That's correct. 4 Q Did you ever practice as a 5 CPA? 6 A I did, yes. 7 Q What period of time did you 8 do that? 9 A Roughly 1995 to '97. 10 Q Your CV also states that 11 your clients have included numerous 12 Fortune 500 companies and a wide variety 13 of industries including semiconductors. 14 Have you ever provided a 15 damages calculation for a semiconductor 16 before? 17 A I have, yes. 18 Q If you want to consult the 19 schedule of your report with your prior 20 testimony, feel free to do that. 21 But would you tell me the 22 instances where you provided a damages 23 calculation for a semiconductor company 24 before? 25 A Samsung Electronics, Demaray</p>
<p style="text-align: right;">Page 43</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Qualcomm's first set of interrogatories. 3 Q And you're not aware of any 4 use of Qualcomm's use of ARM marks today; 5 is that right? 6 A Well -- 7 MR. MOONEY: Objection, 8 form. 9 A Again, I want to be careful 10 that I don't run into any legal issue 11 here. I am not aware of that use as -- 12 as a general statement. Whether or not 13 there is anything going on in the 14 background, I might not be aware of or 15 whether something constitutes trademark 16 infringement or alleged trademark 17 infringement. I don't have an opinion on 18 that. But as a -- as a non-legal person, 19 I'm not aware of anything. 20 Q And I understand from your 21 CV that you have an undergraduate degree, 22 a bachelor's in management; is that 23 right? 24 A Business management, yes. 25 Q And then you got a master's</p>	<p style="text-align: right;">Page 45</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 v. Samsung. 3 Q Which page are you on now? 4 A Page 1 of 5. 5 Q Demaray versus Samsung? 6 A That's correct. 7 Q You could keep going through 8 the list. 9 A Power Integrations versus 10 Fairchild Semiconductor. 11 Q Which page are you on? 12 A Page 5. 13 Q Do you recall any others? 14 This was for your last four years. Do 15 you recall any others? 16 A Yeah. I'm forgetting the 17 name of one that was, I guess, more 18 recent. I'll have to see if I can recall 19 it throughout the course of the 20 deposition. Those are the ones that I 21 recall. 22 Q And the Power Integrations 23 company, you estimated damages there. 24 What was the general nature 25 of the claim for which you were</p>

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<p style="text-align: right;">Page 46</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 estimating damages? 3 A I believe it was a patent 4 infringement matter. 5 Q And with respect to the 6 Demaray versus Samsung, what was the 7 general nature of that case for which you 8 were estimating damages? 9 A It was a patent infringement 10 matter. 11 Q And in both of those cases, 12 were you estimating damages for the 13 plaintiff? 14 A I don't believe so, no. 15 Q So let me break it down 16 then. 17 So for the Demaray versus 18 Samsung case, were you estimating damages 19 for the plaintiff? 20 MR. MOONEY: Objection, 21 form. 22 A No. 23 Q And for Power Integrations, 24 were you estimating damages for the 25 plaintiff?</p>	<p style="text-align: right;">Page 48</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 breach of a license agreement on behalf 3 of the party who was claiming damages? 4 A I would say several, many. 5 I don't recall. It's a very common form 6 of -- common form of legal action. 7 Q So by virtue of the fact 8 that you've been deposed over 100 times, 9 I assume you've been retained as an 10 expert over 100 times. Is it hundreds of 11 times? 12 A I would say it's over 100 13 times. Whether it's 200 or 300 times, I 14 don't know. I've been doing this for 15 almost 30 years. 16 Q So when you say you've 17 estimated damages for alleged breach of a 18 license agreement on behalf of a 19 plaintiff many times, I'm trying to 20 understand what range that would be, 21 given how often you've been retained as 22 an expert. 23 A Well, I guess I would -- as 24 I'm listening to your question now, you 25 used the word license agreement. I would</p>
<p style="text-align: right;">Page 47</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A No. 3 MR. MOONEY: So the record 4 is clear, who was he retained by or 5 whose damages was he allegedly 6 assessing? 7 MR. ISAACSON: I was asking 8 if he was estimating damages for the 9 plaintiff. I see what you're saying. 10 Fair point. 11 MR. MOONEY: It may be clear 12 to everybody else. 13 MR. ISAACSON: No. I think 14 you are correct. 15 Q So for Power Integrations, 16 were you estimating damages on behalf of 17 the plaintiff, working for the plaintiff? 18 A No. 19 Q And the same question then 20 in Demaray. 21 Were you estimating damages 22 working for the plaintiff? 23 A No. 24 Q How often in your career 25 have you estimated damages for alleged</p>	<p style="text-align: right;">Page 49</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 say when I think of breach of contract, I 3 think a breach of contract for all types 4 of agreements. 5 Q I'll say breach of a 6 contract. 7 A So I've been involved in 8 breach of contract agreements as part of 9 numerous lawsuits. I can't tell you how 10 many as I sit here. 11 Q Would it be dozens? 12 A I would say certainly, it 13 could be dozens. I don't know. It's not 14 something I've committed to memory. But 15 it's a relatively -- well, it's not an 16 uncommon claim for there to be a breach 17 of contract. In that breach of contract, 18 we are looking to assess what the harm to 19 the plaintiff is based upon that breach. 20 Q And within those cases, have 21 you sometimes estimated damages for 22 alleged breach of a license agreement on 23 behalf of the party claiming damages? 24 A I believe that to be true as 25 well, yes.</p>

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<p style="text-align: right;">Page 50</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q And can you point me to any 3 standard manuals or publications that set 4 forth methods you've relied on in the 5 past for estimating damages for the 6 alleged breach of a contract? 7 A Well, I would say that there 8 are various treatises, damages handbooks, 9 damages text. I haven't committed them 10 all to memory. We referred to them from 11 time to time. I generally am aware of if 12 there is a breach of contract, there can 13 be a number of different forms of damages 14 that may be considered. 15 And factually, each case is 16 different, the circumstances are 17 different, the parties are different, the 18 agreements are different. And we are 19 looking to identify the measure of 20 damages and the construct of damages, 21 which is most similarly situated to not 22 only the harm, but the facts of that 23 case. 24 Q Are there any treatises, 25 damages handbooks or damages text that</p>	<p style="text-align: right;">Page 52</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 committed them to memory in a way that I 3 could provide clarity here. 4 Q And the only one you can 5 remember now right now is the AICPA 6 publication? 7 A Maybe stated a little bit 8 differently, I can't remember the 9 specific titles. If you want me to check 10 at a break, I can certainly do that. 11 But, again, it's not something that I've 12 committed to memory. 13 Q I think that would be great 14 if you checked it at a break. 15 Without having to name the 16 specific titles, if there's ways of 17 pointing me to the publication, that 18 would be useful. 19 A Sure. 20 Q And are there common methods 21 you have used in the past to estimate 22 damages for alleged breach of a license 23 agreement? 24 A So ultimately, if you are 25 looking at issues of breaching a license</p>
<p style="text-align: right;">Page 51</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 you could point me to that do set forth 3 methods that you've relied on in the past 4 for estimating damages for breach the 5 contract? 6 A Yes. Again, there's an 7 AICPA damages handbook that we've used in 8 the past. I think there's several kind 9 of general damages type handbooks. 10 Again, I haven't committed the titles to 11 memory. But, yes, there's numerous of 12 them. 13 Q There's the AICPA damages 14 handbook. 15 Without regards to the 16 specific titles, without remembering 17 specific titles, is there any other way 18 to refer me to materials that you've 19 relied on, organizations that published 20 it, anything else? 21 A Not as I sit here. Like I 22 said, there's various manuals or 23 treatises that set forth those measures 24 of damages that one can look at. So, 25 yes, they're out there. I haven't</p>	<p style="text-align: right;">Page 53</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 agreement, you could look at things such 3 as potential lost profits. You could 4 look at a potential for a royalty. When 5 you talk about breaches more generally, 6 you're looking at things such as benefit 7 of the bargain, or sometimes people go 8 the other way. And they want to talk 9 about rescission. Sometimes people want 10 to talk about restitution damages, things 11 like that, are whenever there's a breach 12 of contract, we look at certain of those 13 potential paths forward. 14 But if you're talking about 15 license agreements for technology or 16 patents, oftentimes, you're looking at, 17 you know, what are the potential harms of 18 that breach now from a monetary 19 standpoint. To the extent there are lost 20 profits or royalty, as I said, you might 21 look there. If there's a breach, such 22 that there would be some price erosion 23 measure of damages, that might be 24 something else you would look at; you 25 know, depending on whether there's now</p>

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<p style="text-align: right;">Page 54</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 some confusion in the marketplace, you 3 might -- you might see some harm to 4 reputation if the party who's offering 5 the product to the market doesn't adhere 6 to certain standards or obligations under 7 the license agreement. So, again, it's 8 all fact-specific. 9 Q And everything you just 10 listed are methods that you have used in 11 the past to estimate damages for either 12 breach of a license agreement or breach 13 of contract; is that correct? 14 A Well, I either used them or 15 considered them. I don't think that was 16 your original question. Your original 17 question was what types. So those are 18 the things that I'm aware of. Again, 19 every fact pattern is distinct. 20 So I would say that those 21 are some of the considerations that I 22 would have. But those considerations 23 would vary based upon the fact patterns 24 in the case. 25 Q So my original question was</p>	<p style="text-align: right;">Page 56</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A That's correct. 3 Q You have used in estimating 4 damages in the past, estimating the 5 benefit of the bargain? 6 A That is correct. 7 Q In estimating damages in the 8 past, you have measured damages called 9 restitution? 10 A That's correct. 11 Q And by restitution, do you 12 understand that is estimating the 13 wrongful profits of the breaching party? 14 A In general, yes, under kind 15 of a fraud type claim, breach of 16 contract, again, I'm not a legal person. 17 But there's almost -- I don't believe 18 that a breach of contract, just in 19 general, allows for benefit of the 20 bargain, unless there's some specific 21 fraudulent act or something else. Again, 22 that's mirror of a legal interpretation. 23 But that's my understanding. 24 Q But regardless of the law, 25 you've used that method to estimate</p>
<p style="text-align: right;">Page 55</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 about methods that you used. I'm not 3 sure if you've used all of these methods. 4 So have you -- 5 A I've used all of those 6 methods. 7 Q For estimating damages in a 8 breach of contract or breach of license 9 agreement? 10 A I have used them all in some 11 form. I'm not sure whether it's in a 12 breach of a license agreement or not. 13 But those are all forms of damages that I 14 have used. Again, the facts of each case 15 are different. I can't tell you as I sit 16 here. I've used all those in the 17 specific reference that you've set forth. 18 Q So you've used -- if I could 19 just break these down briefly -- in the 20 past in estimating damages, the method of 21 estimating a reasonable royalty; is that 22 right? 23 A I have. 24 Q You have used in the past in 25 estimating damages, lost profits?</p>	<p style="text-align: right;">Page 57</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 damages? 3 A Well, I think it's 4 important, the context, so that we don't 5 get crosswinds. But, yes, I've used that 6 method, not only in those type cases, but 7 also trademark cases or trade secret 8 cases. 9 Q And you've also in the past 10 estimated damages using price erosion? 11 A That's correct. 12 Q And you've also estimated 13 damages for harm to reputation when there 14 was confusion in the marketplace? 15 A That is correct. You see 16 that in trademark cases, things of that 17 nature. 18 Q And in the past, have you 19 estimated damages for future damages for 20 breach of a contract or license 21 agreement? 22 MR. MOONEY: Objection, 23 form. 24 A I can't say that I haven't. 25 To the extent that there was some kind of</p>

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<p style="text-align: right;">Page 58</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 specific performance type argument 3 where -- or not specific performance, I 4 beg your pardon, benefit of the bargain 5 type argument where you're playing out 6 the term of a contract and what the 7 parties had negotiated or bargained for. 8 Again, it would have had to have been 9 included in the contract and, again, very 10 fact-specific.</p> <p>11 Q So you believe you've 12 estimated future damages where a contract 13 had a term that was moving forward into 14 the future?</p> <p>15 A To the extent that you were 16 looking at a contract and the information 17 in the contract allowed you to do so. So 18 the example might be I agree to purchase 19 X amount of widgets over the period of 20 the term of the contract. And 21 ultimately, the company doesn't purchase 22 those. And so the supplying company buys 23 the equipment or material in order to get 24 that widget to the potential purchaser. 25 But the potential purchaser walks away,</p>	<p style="text-align: right;">Page 60</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 future value of the license right? 3 A In what way? 4 Q So when you're using a 5 reasonable royalty to estimate damages, 6 do you take into account the future value 7 of the license right that is the subject 8 of the royalty? 9 A That's the same question. 10 It's unclear to me. So you have to do 11 better. 12 Q I'm not clear on why you 13 don't understand it. 14 So when you're using a 15 reasonable royalty to estimate damages, 16 do you take into account, future value of 17 the license right in any respect? 18 A Again, I'm trying to 19 understand when you say future value of 20 the license right, if you're asking me 21 whether you're looking at what parties to 22 a hypothetical negotiation would do. 23 You're sometimes taking into account 24 something called the Book of Wisdom, 25 which might result in some awareness</p>
<p style="text-align: right;">Page 59</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 leaving the supplying company with a 3 boatload of inventory and no one to sell 4 it to. So there's carrying costs and 5 things like that, that you would take 6 into play, you know, kind of going 7 forward.</p> <p>8 Q When you have used the 9 reasonable royalty method for calculating 10 damages, in calculating that royalty, do 11 you take into account both past and 12 future harm?</p> <p>13 A Well, we usually are 14 calculating the royalty for -- based upon 15 the number of units, if you will, that 16 are subject to a breach.</p> <p>17 But, of course, you don't 18 know what the situation going forward 19 past either the trial date or the current 20 date of the report is to know how many 21 unit sales would be or how the market 22 develops going forward. So in large 23 part, no.</p> <p>24 Q So when you're looking at 25 reasonable royalty, do you look at the</p>	<p style="text-align: right;">Page 61</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that, you know, you didn't know that the 3 hypothetical that is only available to 4 you now, post the hypothetical 5 negotiation date. I do believe that 6 courts accept and have allowed the 7 concept of Book of Wisdom under certain 8 circumstances. So it's certainly 9 something I would consider, again 10 factually based upon a certain fact 11 pattern.</p> <p>12 Q When you've estimated 13 damages for alleged breach of a license 14 or a contract, have you done that in some 15 cases where the party who claims to be 16 injured said that it had lost goodwill?</p> <p>17 A So I know that goodwill 18 is -- has been incorporated into certain 19 cases. I don't know if I've specifically 20 worked on a project that is consistent 21 with what you're referring to.</p> <p>22 Again, as I stated earlier, 23 in a situation where you're looking at, 24 say, a trademark case and one says, hey, 25 you're infringing my trademark, you're</p>

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<p style="text-align: right;">Page 62</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 going to harm my reputation and my 3 goodwill based upon your infringing use 4 of my mark. So that's certainly 5 something that has been a part of a case 6 that I have worked on. Those goodwill 7 and reputational harms are oftentimes 8 very difficult to calculate, depending on 9 the types of information that you have 10 available to you. So it's certainly been 11 present in certain cases that I've been 12 involved in.</p> <p>13 Q Based on your background as 14 a damages expert, do you agree that 15 damages experts would commonly calculate 16 damages for a breach of a license 17 agreement by calculating a reasonable 18 royalty rate?</p> <p>19 A I think that a reasonable 20 royalty rate is one measure of damage 21 that can be used. To say it's common or 22 not common, I don't know. I haven't done 23 that study. It's certainly one measure 24 of damage.</p> <p>25 If you were looking at a</p>	<p style="text-align: right;">Page 64</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A Well, again, a reasonable 3 royalty in a situation where there's a 4 breach is -- oftentimes, it's part of the 5 agreement. So when you say determination 6 of a reasonable royalty, oftentimes, the 7 royalty is already determined. It's 8 really just a matter of how many units 9 are identified and how that -- how that 10 function is going forward. Again, this 11 is setting aside any other types of 12 damages and the factual nature of the 13 dispute.</p> <p>14 Q Do you have any reason to 15 say that reasonable royalty would not be 16 an accepted method for estimating damages 17 in this case?</p> <p>18 A In the one that we're here 19 on today?</p> <p>20 Q Yes.</p> <p>21 A Well, I think that in this 22 particular case, based upon the harms 23 that ARM has identified and the documents 24 that I've reviewed, I don't think it 25 would be adequate to compensate ARM. And</p>
<p style="text-align: right;">Page 63</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 contract, whereby a party just stops 3 paying royalties and they've now breached 4 the licensing agreement and the licensor 5 goes to the licensee and says, hey, 6 you've breached the agreement, you need 7 to pay us a royalty per the term of the 8 contract.</p> <p>9 I've been involved in cases 10 which I've been asked to perform somewhat 11 of a royalty audit. And to the extent 12 there are additional sales that a royalty 13 has not been paid upon, I've been asked 14 to kind of summarize those from an 15 accounting standpoint.</p> <p>16 So I would say, yes, in 17 those kind of breach of a license 18 agreement where we're asked to do royalty 19 audit type functions, I've seen that.</p> <p>20 Q Would you consider 21 reasonable royalty to be a standard 22 method of calculating damages in your 23 field for breach of a license agreement 24 where the alleged breach has to do with 25 using information on an unlicensed basis?</p>	<p style="text-align: right;">Page 65</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 it certainly wouldn't be calculating 3 damages to the harms that ARM would 4 likely incur to a reasonable degree of 5 certainty.</p> <p>6 Q If you go back to your -- 7 MR. MOONEY: We're at 115, 8 counsel.</p> <p>9 MR. ISAACSON: The next 10 question will take a few minutes, if 11 you want to take a break.</p> <p>12 MR. MOONEY: That would be 13 great.</p> <p>14 THE VIDEOGRAPHER: This will 15 end Media Unit 1, going off the 16 record at 10:21.</p> <p>17 (A short recess was taken.)</p> <p>18 THE VIDEOGRAPHER: We're 19 back on the record at 10:36. This 20 will begin Media Unit 2.</p> <p>21 Q If we could go back to your 22 list of testimony, which is part of 23 Schedule 1 of your report, could you 24 identify on this list anytime you 25 estimated damages on behalf of a party</p>

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<p style="text-align: right;">Page 78</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 poor behavior by attorneys who settled a 3 case that Mirowski did not believe based 4 upon current legal counsel that the 5 counsel should have settled the case. 6 And so this was a follow-on 7 case, so a case within a case, which 8 brought in a variety of arguments from 9 the initial case and what parties had 10 concluded or what parties thought at the 11 time of that first case of the case 12 within a case where there was some type 13 of attorney misbehavior. 14 And in the second case, I 15 was asked to come in and provide some 16 opinions. I don't necessarily recall the 17 extent of the opinions as I sit here. 18 But it was a somewhat complex 19 multi-faceted litigation, including 20 prior cases, prior license agreements, 21 poor behavior by attorneys, all of which 22 somewhat were incorporated into this case 23 within a case, best I can recall. 24 Q And did you calculate a 25 reasonable royalty?</p>	<p style="text-align: right;">Page 80</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 fifth page. 3 Q Thank you. 4 The Bay Materials case, did 5 you give an opinion that monetary damages 6 would not -- 7 A Sorry. Can you please state 8 that again? 9 Q Sure. 10 In the Bay Materials case, 11 did you give an opinion that monetary 12 damages would not be adequate to 13 compensate a party? 14 A That's correct. 15 Q In Nevro, did you give an 16 opinion that monetary damages would not 17 be adequate to compensate a party? 18 A That's correct. 19 Q And in Liqwd versus L'Oreal, 20 did you give an opinion that monetary 21 damages would not be adequate to 22 compensate a party? 23 A I give an opinion that 24 monetary damages would be adequate to 25 compensate.</p>
<p style="text-align: right;">Page 79</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A I don't recall. 3 Q Let's go back to your expert 4 report and your list of cases. 5 A Okay. 6 Q How many of these cases or 7 can you identify which cases which you 8 were asked to provide an opinion about 9 whether damages were adequate to 10 compensate a party as opposed to 11 providing an actual calculation of 12 damages or discussing an actual 13 calculation of damages? 14 MR. MOONEY: Objection, 15 form. 16 A I believe Bay Materials is 17 one under A. 18 Q I see it on page 1. 19 A I believe Nevro. 20 Q Where's Nevro? 21 A Page 4. L'Oreal. I believe 22 that's it. 23 Q I'm sorry. 24 L'Oreal, did you say? 25 A It's Liqwd v. L'Oreal on the</p>	<p style="text-align: right;">Page 81</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Other than these three cases 3 in your career, do you remember any other 4 cases where you gave opinions that 5 monetary damages would or would not be 6 adequate to compensate a party? 7 A I believe I have in the 8 past. I don't recall as I sit here what 9 additional cases or what other cases that 10 I can think of at this point. I seem to 11 recall there was a case involving Under 12 Armour sometime ago. 13 Q Any other cases you recall? 14 A I believe there was a matter 15 involving the automotive manufacturer who 16 manufactures the Crosstrek automobile. 17 Q Any other cases you 18 remember? 19 A Not that I sit here. 20 Doesn't mean there weren't any. But 21 those are the ones that I recall. 22 Q In the Under Armor case, did 23 you give the opinion that monetary 24 damages would or would not be adequate to 25 compensate a party?</p>

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<p style="text-align: right;">Page 82</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A I believe I gave the opinion 3 that monetary damages could be determined 4 in that case. 5 Q And the same question for 6 the Crosstrek automobile case. 7 A And to be clear, that was a 8 trademark case. And the Crosstrek case 9 was also a trademark case. And I believe 10 I argued that monetary damages would 11 compensate for the harm. 12 Q That's a good point. 13 What was the general nature 14 of the case in Liqwd and L'Oreal? 15 A That was a patent case over 16 a product called Olaplex, a hair care 17 product. 18 Q What was the general nature 19 of the case of Nevro versus Boston 20 Scientific Corporation? 21 A Case involving spinal cord 22 stimulation, a patent case. 23 Q And the general nature of 24 the case of Bay Materials? 25 A Patent case involving the</p>	<p style="text-align: right;">Page 84</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 point, whether certain potential 3 licensees have decided not to take a 4 license with ARM or certain potential 5 licensees are requesting relief, relief 6 meaning lower royalty rates. 7 I understand that in my 8 discussions with Mr. Williamson and 9 Mr. Abbey that there has been a 10 consistent level of discussion amongst 11 licensees who are speaking with ARM 12 personnel about the Qualcomm situation. 13 So while I think the market, 14 as I understand it -- and by market, has 15 an awareness, just by virtue of what's 16 available in ARM's 10-K, which describes 17 the nature of the lawsuit and the 18 potential harms that could arise from 19 such a lawsuit. If things were to move 20 forward, it's impossible to tell what has 21 happened yet. 22 However, I understand that 23 these are perspective harms to the extent 24 that specific performance is not 25 ultimately granted by the court in this</p>
<p style="text-align: right;">Page 83</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 correction for malocclusions. 3 Q If you look at your reply 4 report, relating to remedies for the 5 defendants' breach of contract, which is 6 Exhibit 256, is the March 25th report. 7 A Okay. 8 Q In paragraph 14, you 9 say, "Given ARM's request for specific 10 performance has not been addressed by the 11 court and denied, the harms discussed in 12 my initial report have not yet 13 transpired." 14 Does it remain the case that 15 today, that none of the harms that you 16 discussed in your reports, in your 17 opening report and reply report have 18 occurred yet? 19 A Well, it's a bit unclear. 20 So if you look at the deposition 21 testimony of ARM witnesses, I believe 22 Mr. Williamson, Mr. Abbey, I think I 23 recall their opinion is it's really 24 impossible to determine what impact 25 Qualcomm's actions have had at this</p>	<p style="text-align: right;">Page 85</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 case. 3 Q Now, you had the chance to 4 review the Williamson and Abbey 5 depositions before your reply report; 6 correct? 7 A That's correct. 8 Q And even before your opening 9 report? 10 A I believe that's correct, 11 yes. 12 Q So when you say in 13 paragraph 14 of your reply report, as we 14 just read, you say, "The harms discussed 15 in my initial report have not yet 16 transpired." 17 So does that statement 18 remain true today? 19 A I would say that in large 20 part, the harms that are set forth in my 21 report are perspective harms. I only 22 attached to that what I am aware of in 23 the depositions, which is as it relates 24 to what Mr. Abbey and Mr. Williamson 25 know, it's my understanding that they [REDACTED]</p>

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<p style="text-align: right;">Page 86</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 [REDACTED] [REDACTED] And they 5 shared in their depositions that it's 6 impossible to know at this point. 7 Q You're sharing with me -- 8 A I'm sorry. I would just 9 like to finish my answer. 10 Q Sure. 11 A So while I understand that 12 these are perspective harms, I also am 13 providing a fulsome understanding of the 14 record as I understand it. 15 MR. MOONEY: I just want to 16 designate the transcript as highly 17 confidential, attorneys' eyes only. 18 Q In your reply report, you 19 say, "The harms discussed in my initial 20 report have not yet transpired." 21 Was that a correct 22 statement? 23 A Certainly. 24 Q And is that a correct 25 statement as of today?</p>	<p style="text-align: right;">Page 88</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A 35? 3 Q Yes. Page 35. We're in 4 Section B of your report. And this is 5 little 1 of your report. And this is 6 actually I think 7B, little 1. 7 The title of this section is 8 "Existing and Prospective ARM Licensees 9 Could Demand More Favorable Terms and 10 Lower Royalties to Account for Increased 11 Risk." 12 There are Footnotes 192 to 13 198 for this section. Those footnotes 14 identify discussions with Will Abbey and 15 Paul Williamson, along with in Footnote 16 195, two deposition excerpts. 17 So are those discussions 18 with Will Abbey and Paul Williamson and 19 those two deposition excerpts the basis 20 for the statements you are making in this 21 section of your report? 22 MR. MOONEY: Objection, 23 form, mischaracterizes the footnote. 24 MR. ISAACSON: What am I 25 getting wrong here?</p>
<p style="text-align: right;">Page 87</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A It is a correct statement as 3 of today. I'm simply supplementing my 4 awareness of the factual record. 5 Q Am I correct that the harms 6 that you have identified in your report 7 will not take place, unless the court 8 refuses to grant ARM's request for 9 specific performance? 10 A Again, it's my understanding 11 that the ARM ecosystem is at risk for the 12 reasons enumerated in my report. And to 13 the extent that the court does not grant 14 specific performance, I understand that 15 the market will then -- in all the ways 16 that I have enumerated in my report -- 17 understand that ARM's ecosystem is 18 compromised as a result of the actions or 19 activities in this case. 20 Q If you could look at page 35 21 of your report. 22 A Which report are you 23 referring to? 24 Q Opening report. So this is 25 Exhibit 255.</p>	<p style="text-align: right;">Page 89</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 MR. MOONEY: There's two 3 deposition excerpts. 4 MR. ISAACSON: Is there a 5 third one? 6 MR. MOONEY: There's three 7 of them. 8 MR. ISAACSON: Oh, 9 deposition. Okay. Thank you. 10 Q I'll just say the same 11 question with three deposition excerpts. 12 Are these discussions with 13 Will Abbey and Paul Williamson and those 14 three deposition excerpts the basis for 15 the statements you are making in this 16 section of the report? 17 A That is correct. Well, I 18 beg your pardon, with the exception of 19 paragraph 78, which is my opinion as an 20 expert in calculating economic damages as 21 part of -- as part of this case, again 22 based upon skills and experience and 23 training. 24 Q But for any facts, for the 25 conclusion that existing prospective ARM</p>

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<p style="text-align: right;">Page 90</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 licensees could demand more favorable 3 terms and lower royalties to account for 4 increased risk, you are relying on your 5 discussions with Will Abbey and Paul 6 Williamson and the three deposition 7 excerpts? 8 A That's correct. 9 Q And when you say could, you 10 say could demand in the title? 11 A Yes. 12 Q Are you assessing any 13 probability that that could happen when 14 you say could? 15 A Well, I'm not offering an 16 opinion on probability. I'm essentially 17 identifying where the harms in the 18 market, harms in ecosystem could 19 undermine ARM's business based upon the, 20 as I said earlier, facts of this case, 21 documents in this case, deposition 22 testimony. 23 Q When you're saying in 24 paragraph 78, "In my opinion, the scope 25 of the harm of existing and prospective</p>	<p style="text-align: right;">Page 92</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 customers or licensees. 3 Q The point that existing and 4 prospective ARM licensees could demand 5 more favorable terms and lower royalties 6 to account for increased risk, is that 7 sufficient for you to reach the opinion 8 that monetary damages in this case cannot 9 be readily determined or quantified and 10 cannot be determined with reasonable 11 certainty? 12 A Certainly. 13 Q You say in 14 paragraph 76, "For example, current and 15 prospective ARM licensees could consider 16 the impact of Qualcomm or other licensees 17 where prospective licensees breaching 18 their license agreements and misusing 19 ARM's technology, ARM confidential 20 information and products embodying such 21 technology or information." 22 So that risk, that ARM 23 licensees could demand more favorable 24 terms and lower royalties, does that 25 happen anytime you have an ARM licensee</p>
<p style="text-align: right;">Page 91</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 ARM licensees demanding more favorable 3 terms and lower royalty rates to account 4 for increased risk cannot be readily 5 determined or quantified, and the damages 6 associated with that harm cannot be 7 determined with reasonable certainty," 8 when you make that statement, is there 9 any level of probability that you are 10 assuming with respect to whether the 11 probability of ARM licensees demanding 12 more favorable terms and lower royalties? 13 A No. I'm not offering a 14 probability here. I'm basing my opinions 15 of those events, again based upon we talk 16 about documents that I've reviewed in 17 this case. I think I mentioned the 18 public filings that Abbey -- excuse me -- 19 that ARM has set forth, identifying the 20 lawsuit with Qualcomm, Nuvia and the 21 potential impacts there. 22 Certainly, my discussion, 23 deposition testimony based upon these 24 experiences that these gentlemen have on 25 a daily basis, discussing with potential</p>	<p style="text-align: right;">Page 93</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 breach their license agreements? 3 A I think that to the extent 4 that ARM licensees breach their license 5 agreements and misuse ARM technology -- 6 and I talk about several impacts of 7 that -- existing licensees may be less 8 inclined to respect their license terms 9 or selectively misinterpret terms. 10 I talk about several other 11 issues as well in the same paragraph, 12 along those same lines. I would say that 13 the fact that this is Qualcomm, and 14 Qualcomm is one of, I think, the three or 15 four largest licensees within the ARM 16 licensing ecosystem. So obviously, very 17 public. 18 And, again, I think 19 Mr. Abbey or Mr. Williamson says, [REDACTED] [REDACTED] [REDACTED] [REDACTED] That's what we have. It's 24 what people trust. If people lose -- if 25 companies lose confidence in that and</p>

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<p style="text-align: right;">Page 94</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 identify that there is additional risk to 3 working under those conditions, well, 4 then, again, there's a compromise to the 5 ecosystem as I understand it. 6 Q So is there a compromise to 7 the ecosystem if an ARM licensee, other 8 than Qualcomm, breaches their license 9 agreement and misuses ARM technology or 10 information? 11 A Well, there certainly could 12 be. I'd need to understand what the fact 13 pattern is. 14 Q And would you have the 15 opinion that monetary damages cannot 16 adequately compensate ARM anytime that an 17 ARM licensee, other than Qualcomm, 18 breached their license agreement and used 19 ARM technology or ARM confidential 20 information? 21 MR. MOONEY: Objection to 22 form. 23 A Again, it would depend on 24 the fact pattern and what was at issue in 25 the case and how the case or situation</p>	<p style="text-align: right;">Page 96</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 could be the case. It depends on the 3 fact pattern. 4 Q So is it your understanding 5 that there can be harms to the ARM 6 ecosystem, as you describe it, by the use 7 of ARM's IP in an unlicensed way for 8 which money damages could be adequate? 9 MR. MOONEY: Objection to 10 form. 11 A Can you ask that again, 12 please? 13 Q Sure. 14 Is it your understanding 15 that there can be harm to the ARM 16 ecosystem by the use of ARM's IP in an 17 unlicensed way for which money damages 18 could be adequate? 19 MR. MOONEY: Same objection. 20 A I don't necessarily 21 understand the question. Maybe I'm 22 getting the tenses wrong. But it almost 23 sounds as if you're saying if someone 24 could provide ARM with a bucket of money 25 that would be adequate to compensate,</p>
<p style="text-align: right;">Page 95</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 played out. It certainly could be the 3 outcome. 4 Q So, for example, on 5 paragraph 73 on the previous page, at the 6 end of paragraph 73, you quote Mr. Haas, 7 saying, [REDACTED] [REDACTED]" 10 Do you have the opinion that 11 anytime an ARM licensee uses ARM IP 12 without a license that ARM can't be 13 adequately compensated with monetary 14 damages? 15 A I would say that to the 16 extent that the ecosystem is damaged by 17 that situation, that very well may be 18 true. Here, again, given the nature of 19 the actions of Nuvia and Qualcomm here, 20 certainly, the belief is, is that the 21 ecosystem will be harmed. And that's 22 borne out in the testimony. It's borne 23 out in documents. It's borne out in 24 information shared with the public 25 through disclosures. So that certainly</p>	<p style="text-align: right;">Page 97</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 does that mean there would be no harm to 3 the ecosystem? 4 Q No. The other way around. 5 If there is a harm to the 6 ARM ecosystem by the use of ARM's IP in 7 an unlicensed way, are there situations 8 where money damages could be adequate to 9 remedy that? 10 MR. MOONEY: Objection to 11 form. 12 A So you're asking me if there 13 is harm to the ecosystem, could someone 14 provide some amount of money to ARM that 15 would remedy the harm to the ecosystem? 16 Q Yes. 17 A Well, I don't necessarily -- 18 I don't necessarily have an opinion on 19 what that sum of money would be. Do I -- 20 is there some negotiation that ARM would 21 have with a potential licensee or with a 22 licensee who has harmed the ecosystem, 23 whereby the parties were negotiating an 24 amount, I can't necessarily value that as 25 I sit here without further information.</p>

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<p style="text-align: right;">Page 98</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 I wouldn't say that there's not a number 3 that they could arrive at. I'd need to 4 think through what that might look like. 5 Q Have you estimated damages 6 in a case before where the injured party 7 was claiming that their licensees could 8 demand more favorable terms and lower 9 royalties due to the breach of a license 10 agreement? 11 A I believe so, yes. 12 Q In which case was that? 13 A I believe it was a topic in 14 the DivX-Harmon lawsuit. 15 Q In the DivX-Harmon case, did 16 the plaintiff DivX contend that the 17 breach of the license agreement there 18 could cause their licensees to demand 19 more favorable terms and lower royalties? 20 A To the best of my 21 understanding, that is correct. I think 22 it also was an issue in the Kokusai case. 23 Q In the DivX case, you 24 estimated a reasonable royalty as damages 25 based on a royalty audit; is that right?</p>	<p style="text-align: right;">Page 100</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 understand the last part of your answer. 3 I understand you said it was used to 4 assess what the unpaid royalty amounts 5 were. 6 But was there a separate 7 amount of damages that were being 8 calculated due to this inability due to 9 this risk of licensees demanding more 10 favorable terms and lower rates? 11 A There was not a separate 12 amount for damages associated with that. 13 Q And then you mentioned 14 another case which I'm -- 15 A I think it was prior to the 16 four years. It was a case involving a 17 company called Kokusai. 18 Q Can you spell Kokusai? Take 19 your best shot. 20 A K-O-K-O-S-A-I, perhaps. 21 Q What was the subject matter 22 of that case? 23 A Royalty audit associated 24 with the unpaid royalties on certain 25 devices used to prepare or create</p>
<p style="text-align: right;">Page 99</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A In that particular case, I 3 didn't estimate damages. I was simply 4 asked to look at the licensing agreement 5 and identify what the unpaid royalty base 6 was based upon financial accounting 7 information and apply that royalty rate 8 that was in the agreement. So I wasn't 9 necessarily asked to determine a royalty 10 rate. 11 Q And was your report there 12 used to estimate damages on behalf of the 13 plaintiff? 14 A It was used to assess what 15 the unpaid royalty amounts were. The 16 harm to the ecosystem of licensees not 17 paying royalties for DivX's technology 18 was an element of the case, which was 19 associated with an inability to calculate 20 damages on what that harm might be, 21 meaning the importance of the ecosystem 22 and the importance of protecting the use 23 of the DivX technology in the 24 marketplace. 25 Q I apologize. I don't</p>	<p style="text-align: right;">Page 101</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 manufactured semiconductors. 3 Q And the plaintiff there 4 claimed that its licensees could demand 5 more favorable terms and lower royalties; 6 is that right? 7 A I believe it related to 8 ecosystem type concepts. I don't recall 9 specifically what they were claiming. 10 Q When you say ecosystem 11 concepts, you mean that a breach of a 12 license agreement can hurt the ecosystem 13 of the relationship with licensees? 14 A Right. Again, all cases are 15 different; right? You can't fold one 16 case over on top of the other and say 17 that they're exactly the same. This case 18 obviously has a unique fact pattern based 19 upon the ecosystem that ARM has built. 20 And the importance of that 21 ecosystem and the position that Qualcomm 22 holds in it is the very public nature of 23 the disagreement between the parties, the 24 transition from essentially a server 25 market to a market in which ARM had not</p>

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<p style="text-align: right;">Page 102</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 necessarily allotted or provided Qualcomm 3 to use the technology that it purchased 4 in breach of -- purchased and implemented 5 in breach of the license agreement. 6 Q Returning to paragraph 76 7 where you said current and prospective 8 ARM licensees could consider the impact 9 of Qualcomm or other licensees or 10 prospective licensees breaching their 11 license agreement, do you know whether 12 ARM has alleged that any other licensees 13 have breached their license agreements 14 with ARM, other than Qualcomm, in the 15 past years? 16 A Are you saying -- are you 17 saying prior to any information related 18 to this case? I'm not sure I understand. 19 Q I'm saying -- 20 A We've got to do a better job 21 of you not interrupting me. 22 Q I was trying to be helpful 23 there because you asked me about my 24 question. 25 A No. That wasn't what I was</p>	<p style="text-align: right;">Page 104</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Did you consider 3 investigating whether Qualcomm and Nuvia 4 are the only alleged breaches of license 5 agreements of ARM? 6 A And do you mean forever and 7 always? 8 Q Sure or at any time. 9 A It wasn't necessary as part 10 of this case. 11 Q When you say it wasn't 12 necessary in order to understand whether 13 there was actual harm to the ARM 14 ecosystem, you didn't want to know 15 whether Qualcomm or Nuvia were the only 16 alleged breeders of license agreements; 17 is that right? 18 MR. MOONEY: Objection to 19 form. 20 A So, again, this is where 21 your question is a bit confusing. If 22 you're talking about before the factual 23 pattern of this case or after the factual 24 pattern of this case, I'm not aware of -- 25 that there's been any additional breaches</p>
<p style="text-align: right;">Page 103</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 asking. What I'm really getting at is, 3 if we're talking about ARM and we're 4 talking about events that happened prior 5 to this litigation, are we -- are you 6 asking me about a potential licensee 7 breach from many, many years ago? Or are 8 you asking me about any potential 9 breaches after the factual pattern that 10 we're aware of in this case? 11 Q Prior to today, are you 12 aware of ARM alleging any breach of its 13 license agreements by its licensees, 14 other than the allegations against 15 Qualcomm? 16 A I don't have an awareness of 17 that. 18 Q Has anyone from ARM told you 19 that they have not alleged breaches of 20 their agreements by any other licensees, 21 other than Qualcomm or Nuvia? 22 MR. MOONEY: Objection to 23 form. 24 A I don't have an awareness of 25 that.</p>	<p style="text-align: right;">Page 105</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that were shared with me as part of my 3 work in this case. 4 My understanding is, as I've 5 written here, given the impact on the 6 licensing ecosystem and the impact of 7 other licensees and their reactions to 8 the factual pattern here, to what extent 9 that those licensees may demand more 10 favorable terms or breach a license 11 agreement, those become, to my 12 understanding, a more factual likelihood. 13 Q And did you take into 14 consideration whether existing or 15 prospective ARM licensees would take into 16 account a large award of money damages 17 for a breach before they decided to 18 consider breaching their own license 19 agreements? 20 A Well, I certainly understood 21 that there was or were negotiations 22 between Qualcomm and ARM prior to the 23 filing of this lawsuit. However, I 24 understand that the parties were not able 25 to reach an agreement.</p>

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<p style="text-align: right;">Page 106</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q So my question's about other 3 licensees. 4 Did you take into 5 consideration whether existing or 6 prospective ARM licensees before they 7 decided to consider breaching their own 8 license agreements would take into 9 account a large monetary award against 10 Qualcomm? 11 MR. MOONEY: Objection, 12 form. 13 A I was answering that 14 question when you interrupted me. 15 Q Well, then I'm not saying it 16 clearly. 17 If in lieu of specific 18 performance, the court awarded a large 19 amount of monetary damages in this case. 20 Do you think that 21 prospective and current licensees of ARM 22 would take that into account in making 23 their decisions about their own licensing 24 agreements? 25 A Well, I can't necessarily</p>	<p style="text-align: right;">Page 108</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 parties would think. But my sense is 3 that the goal here is to protect the ARM 4 ecosystem. And given the factual pattern 5 of this case, if this were to move 6 forward without there being a specific 7 performance, that would have a harm to 8 the ecosystem. If there was some amount 9 of money that was communicated to the 10 market, I don't know what that would be. 11 Again, I don't think it's -- 12 can be determined with a reasonable 13 degree of certainty as I sit here based 14 upon the unknown impacts of the breach at 15 this time on the ecosystem. 16 MR. MOONEY: We've just been 17 going over an hour, if this is a good 18 time for a break. 19 MR. ISAACSON: Sure. 20 THE VIDEOGRAPHER: This will 21 end Media Unit 2, going off the 22 record at 11:41. 23 (A short recess was taken.) 24 THE VIDEOGRAPHER: We're 25 back on the record at 11:54. This</p>
<p style="text-align: right;">Page 107</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 tell you what other prospective licensees 3 would think. They may or they may not. 4 Again, I think that the position of ARM 5 is to protect the ecosystem because the 6 ecosystem has been -- the licensing 7 ecosystem system has been largely built 8 over a significant period of time, 9 significant amounts of R&D, investments. 10 I think it's upwards of 40 percent of 11 their overall revenue being plowed back 12 into R&D in order to create technology 13 that licensees want. 14 And licensees need to trust 15 that when they license into that 16 ecosystem that they will, in fact, get 17 the benefits of the ecosystem while at 18 the same time be able to trust that the 19 ecosystem is intact. 20 And now if you're asking me 21 to the extent that there was a large sum 22 of money that was paid that showed the 23 ecosystem or represented to the ecosystem 24 that the ARM licensing ecosystem was 25 intact, I can't tell you what those</p>	<p style="text-align: right;">Page 109</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 will begin Media Unit 3. 3 Q Am I correct that if ARM 4 licensees were deciding they still 5 trusted the ARM ecosystem after a large 6 award of damages, you don't have an 7 opinion about what they would think or 8 not think about that? 9 MR. MOONEY: Objection to 10 form. 11 A Can you repeat that? 12 Q Sure. 13 Am I correct that if ARM 14 licensees were deciding whether they 15 still trusted the ARM ecosystem after a 16 large award of damages against Qualcomm, 17 you don't have an opinion about what they 18 would be thinking? 19 MR. MOONEY: Objection, 20 form. 21 A You said if they were 22 considering the ecosystem after a large 23 award of damages, you're asking me if I 24 have an opinion as to what they would be 25 thinking?</p>

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<p style="text-align: right;">Page 110</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Yes. 3 A Well, I mean I can't tell 4 you specifically what each member of the 5 ecosystem would be thinking. But I guess 6 I could -- I would say that it would 7 depend on whether there was a 8 communication to the marketplace that the 9 ecosystem was, in fact, intact and that 10 their participation in that ecosystem 11 remained without risk and would provide 12 them the benefits that they had sought 13 from their first introduction and 14 entrance into the ecosystem.</p> <p>15 Q Am I correct that you would 16 not have an opinion if there were a large 17 award of damages against Qualcomm in this 18 case whether licensees would conclude 19 that the ecosystem was still intact and 20 without risk?</p> <p>21 MR. MOONEY: Objection to 22 form.</p> <p>23 A And you're saying that is in 24 lieu of specific performance?</p> <p>25 Q Yes.</p>	<p style="text-align: right;">Page 112</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 intact. And that would be when licensees 3 are adhering to the terms of the license 4 agreements.</p> <p>5 Q Is it your view that 6 licensees will not consider the ARM 7 ecosystem to be intact without risk, 8 unless a court grants what ARM's urging 9 the court to do as the proper outcome for 10 this case?</p> <p>11 MR. MOONEY: Objection, 12 form.</p> <p>13 A It's my opinion that the 14 marketplace would have to view ARM's 15 ability to control and maintain its 16 ecosystem based upon the contractual 17 obligations of those who are part of it.</p> <p>18 Now, to the extent that 19 there is a monetary judgment or award in 20 this case, again, I can't tell you how 21 participants would view that 22 independently. But my understanding is, 23 is that the importance of the ecosystem 24 and ARM's ability to enforce its rights 25 and maintain that ecosystem is, as I</p>
<p style="text-align: right;">Page 111</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A Well, again, it would depend 3 on how the marketplace viewed that award. 4 I can't tell you that that award would be 5 adequate to compensate for harms that 6 otherwise would have occurred. I can't 7 tell you that number could have been 8 calculated to a degree of reasonable 9 certainty.</p> <p>10 But if you're asking me to 11 put myself in the mind's eye of the 12 ecosystem, I believe the ecosystem 13 would -- to the extent that they're aware 14 it -- be of the opinion that whatever 15 ARM's urging the court to do would be the 16 outcome. Anything less than that I think 17 would be seen as ARM's inability to 18 control and protect its ecosystem.</p> <p>19 Again, whether I can provide 20 you with an understanding of what each 21 individual or specific licensee in the 22 ecosystem would be thinking, no, I can't 23 provide you that. I think that the only 24 way to maintain that ecosystem would be 25 to show the market that the ecosystem is</p>	<p style="text-align: right;">Page 113</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 understand it, critical to ARM's ability 3 to continue to invest in the ecosystem 4 and grow the ecosystem and enter into new 5 and emerging markets and things of that 6 nature.</p> <p>7 Q If you look at page 36 of 8 your report.</p> <p>9 A Sorry. Can you repeat that?</p> <p>10 Q Page 36 of your report.</p> <p>11 A Thank you.</p> <p>12 Q The section there, little 2, 13 is titled "Existing and Prospective ARM 14 Licensees Could Exploit Development and 15 Financial Terms of Other Licenses in 16 Unexpected Ways to Compete Against ARM's 17 Partners."</p> <p>18 The footnotes that relate to 19 this section are Footnotes 199 through 20 217. And you'll see that those refer 21 often to the discussions and then also to 22 some depositions.</p> <p>23 For the statement that 24 existing and prospective ARM licensees 25 could exploit development and financial</p>

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<p style="text-align: right;">Page 114</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 terms of other licenses in unexpected 3 ways to compete against ARM's partners, 4 are you depending upon your discussions 5 with Will Abbey and Paul Williamson, as 6 well as the depositions, the deposition 7 of Will Abbey? 8 A I'm certainly citing to that 9 information for purposes of my discussion 10 in this report. That's correct. 11 Q Are you relying on anything 12 else for the conclusion that existing and 13 prospective ARM licensees could exploit 14 development and financial terms of other 15 licenses in unexpected ways to compete 16 against ARM's partners? 17 A Not beyond my skills and 18 experience. 19 Q Well, when you say your 20 skills and experience, do you have 21 background in this industry or some 22 skills and experience that you would rely 23 on to support the conclusion that 24 existing and prospective ARM licensees 25 could exploit development and financial</p>	<p style="text-align: right;">Page 116</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q I apologize. I don't 3 understand how that answers my question. 4 So let me ask you again. 5 Do you have some expertise 6 or background that you would rely on to 7 support the conclusion that's stated in 8 little 2, existing and prospective ARM 9 licensees could exploit development and 10 financial terms of other licenses in 11 unexpected ways to compete against ARM's 12 partners? 13 A So little 2 is a summary 14 statement, which reflects the information 15 contained in my analysis of paragraphs 16 79, 80, 81, 82, 83, 84. And, finally, I 17 provide my opinion as to whether there is 18 an ability to calculate with a reasonable 19 degree of certainty, the harms that would 20 result. 21 So I think we've been pretty 22 clear I rely upon my review of the 23 evidence produced in this case to 24 identify what those harms would be. And 25 then I assess, well, what measure of</p>
<p style="text-align: right;">Page 115</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 terms of other licenses in unexpected 3 ways to compete against ARM's partners? 4 A Well, again, I'm really -- 5 I'm identifying two things here, the 6 benefit of my analysis in reviewing the 7 record evidence here in this case; in 8 addition to that, assessing whether the 9 harms associated with the activities that 10 I've talked about could be readily 11 determined or quantified within a 12 reasonable degree of certainty. 13 So as a damages expert who 14 has assessed damages in a multitude of 15 matters, I am looking at the factual 16 background of this case. And I'm 17 providing my opinion that to -- an 18 attempt to provide the harm associated 19 with these prospective ARM licensees 20 doing the -- or taking the positions that 21 are identified in the prior paragraphs 22 that those measures of harm could not be 23 determined with a reasonable degree of 24 certainty as they couldn't be readily 25 quantified.</p>	<p style="text-align: right;">Page 117</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 damages would one in my position with an 3 experience in assessing damages in 4 matters like this, how one would go about 5 doing that to a reasonable degree of 6 certainty. 7 And it's my opinion that the 8 harms of existing and prospective ARM 9 licensees who are exploiting the 10 development and financial terms of other 11 licensees in unexpected ways cannot be 12 readily determined or quantified within a 13 reasonable degree of certainty. 14 Q So am I right that for 15 paragraphs 80 through 84, you are 16 reviewing evidence in this case and not 17 expressing expert opinions? 18 A I'm reviewing the record 19 evidence in this case as to the likely 20 harms that would take place. And I'm 21 identifying my opinions as to those harms 22 and whether there could be monetary 23 damages assessed to those with a 24 reasonable degree of certainty. 25 Q Now I'm being specific to 80</p>

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<p style="text-align: right;">Page 118</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 through 84. I see in 85, you have in my 3 opinion.</p> <p>4 So in those paragraphs where 5 you're going through facts and evidence, 6 are you expressing any opinions based on 7 your expert background?</p> <p>8 MR. MOONEY: Objection.</p> <p>9 Q Or there, are you just 10 relying on the discussions with Will 11 Abbey and Paul Williamson and the 12 deposition excerpts?</p> <p>13 MR. MOONEY: Objection, 14 form, and to the extent that it 15 mischaracterizes those paragraphs.</p> <p>16 A Look, if you want to 17 testify, you could have somebody take 18 your deposition. But what I'm telling 19 you is, what I have answered is exactly 20 what I did. I performed an analysis 21 based upon the material available to me 22 in this case.</p> <p>23 And as part of that 24 analysis, I set it forth in these 25 paragraphs. And then I determine whether</p>	<p style="text-align: right;">Page 120</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A This report, whatever 3 paragraph that you're choosing to show 4 me, is the summary of information that I 5 am aware of in this case.</p> <p>6 Q When you're saying a summary 7 of information in this case, are you 8 saying that those are not opinions that 9 you're rendering?</p> <p>10 MR. MOONEY: Objection, 11 form.</p> <p>12 A Well, the report contains my 13 opinions and conclusions. This is a 14 summary of the material, the evidence 15 that I have reviewed. And based upon 16 that evidence, I'm offering the opinion 17 from a financial standpoint that there 18 would not be an amount that could be 19 quantified in the manner in which I set 20 forth in paragraph 85.</p> <p>21 Q In paragraph 80, about 22 halfway down, there's a sentence that 23 says, "ARM does not intend or expect."</p> <p>24 Do you see that?</p> <p>25 A No, I do not.</p>
<p style="text-align: right;">Page 119</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 there would be an ability for me to 3 calculate damages. So maybe we just 4 stick with what my opinion is.</p> <p>5 Q Well, are you expressing any 6 opinions in paragraphs 80 through 84?</p> <p>7 A My opinions are based upon 8 the factual record that I have seen which 9 suggests to me that these are the likely 10 harms. If you're asking me if I have 11 independently tested whether those harms 12 have occurred, my understanding is that 13 they are prospective harms that would 14 likely occur, to the extent that the 15 court in this case did not award a result 16 of specific performance.</p> <p>17 Q Looking specifically at 18 paragraphs 80 through 84, are you 19 expressing any opinions in those 20 paragraphs?</p> <p>21 A I'm setting forth my 22 understanding of the record. The whole 23 report is my opinions.</p> <p>24 Q I'm just asking about these 25 paragraphs.</p>	<p style="text-align: right;">Page 121</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q So go to paragraph 80. 3 Eight lines, there's a sentence that 4 begins "ARM does not intend or expect." 5 Do you see that?</p> <p>6 A I do.</p> <p>7 Q So that sentence says, "ARM 8 does not intend or expect, and ARM 9 licensees do not pay for the right to 10 acquire and use products developed by 11 other licensees under other license 12 agreements with other technical and 13 financial terms. And that may have been 14 negotiated with different downstream 15 products in mind."</p> <p>16 And your basis for talking 17 about what ARM does not intend or expect, 18 that's based on your discussions with 19 Paul Williamson and Christine Tran; 20 right?</p> <p>21 A Yes. It's based upon my 22 understanding of the factual record in 23 this case, the evidence that I have 24 gathered as part of my analysis.</p> <p>25 Q Well, with respect to this</p>

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<p style="text-align: right;">Page 130</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Are you from your 3 investigation or your conversations with 4 those individuals aware of any ARM 5 license agreement that prohibits a 6 licensee from being acquired by another 7 ARM licensee? 8 A That sounds like a legal 9 question. No, I'm not aware of that. 10 Q Are you aware of any ARM 11 license agreement that prohibits a 12 licensee from acquiring another licensee? 13 A How is that different than 14 the last question? 15 Q The first one was being 16 acquired, and now it's the acquirer. 17 A No. I'm not aware of 18 anything like that. 19 Q Are you aware of any license 20 agreement that states in the event of an 21 acquisition of the licensee, the 22 licensee's agreement will be terminated? 23 A I'm not necessarily -- no, 24 I'm not necessarily aware of that. 25 Again, I think it would depend on whether</p>	<p style="text-align: right;">Page 132</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q And the second sentence. 3 In the second sentence, it 4 says, "Mr. Abbey testified that if all 5 partners have the belief if I acquire a 6 company, I do anything I want with ARM 7 technology. That weakens our brand. And 8 therefore, it is important for us to 9 protect that in the marketplace." 10 Do you think if that was a 11 concern, could ARM protect itself and its 12 ecosystem by having provisions in its 13 licenses that prohibited acquisitions or 14 that terminated a license in the event of 15 an acquisition? 16 A Are you asking me if -- 17 MR. MOONEY: Objection, 18 form. 19 A It feels like a legal 20 question. But just to make sure, are you 21 asking me if I think that ARM should have 22 other provisions in its license 23 agreements that would prevent certain 24 things? 25 Q Not should.</p>
<p style="text-align: right;">Page 131</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 there was a breach, and then there's a 3 termination which comes from that breach 4 would be my understanding. 5 Q You do consider the ARM 6 licensing agreements to be meticulously 7 drafted based on your investigation in 8 this case; correct? 9 MR. MOONEY: Objection, 10 form. 11 A I don't know what you mean 12 by meticulously drafted. Can you share 13 with me what you mean by that? 14 Q Sure. I will do that 15 probably after lunch. 16 A I mean I would say that it's 17 my understanding that ARM is very aware 18 of the agreements that it drafts and 19 drafts them with the ecosystem in mind, 20 would be my thinking. 21 Q On paragraph 73 -- 22 A Okay. 23 Q -- you're quoting Mr. Abbey. 24 You see that? 25 A First sentence?</p>	<p style="text-align: right;">Page 133</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 I'm asking you, with respect 3 to that concern that's discussed in your 4 report, could ARM protect itself in its 5 ecosystem by having provisions in its 6 licenses that prohibit acquisitions or 7 that terminate a license in the event of 8 an acquisition? 9 A You're asking me if they 10 could? 11 Q Yes. 12 A I don't really have an 13 opinion on that. Maybe that's -- maybe 14 that's fair or not fair. I'm not sure 15 how that would implement any other legal 16 provision that may arise. 17 Q If we can look at page 39 of 18 your report -- 19 A Sure. 20 Q -- this section, little 3 of 21 your report is titled "ARM Will Not Be 22 Able to Rely on Partners Respecting 23 Provisions in its Existing and 24 Prospective Licenses to Protect its 25 Intellectual Property."</p>

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<p style="text-align: right;">Page 134</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 The footnotes in this 3 section are 218 through 223 which again 4 relate to either discussions that you had 5 or deposition excerpts in this case of 6 Will Abbey.</p> <p>7 For the evidence in this 8 section that you reviewed, are you 9 relying on those discussions and the 10 deposition of Mr. Abbey?</p> <p>11 MR. MOONEY: Objection, to 12 the extent that it mischaracterizes.</p> <p>13 A Yes. I am relying upon the 14 information, the evidence in this case, 15 which includes the deposition of 16 Mr. Abbey and Mr. Williamson, as well as 17 the discussions of the same.</p> <p>18 Q In paragraph 86, in the 19 second sentence, you refer to a chilling 20 effect. Do you see that?</p> <p>21 A I do.</p> <p>22 Q It says, "This chilling 23 effect of increased uncertainty may 24 impact the number and type of licenses 25 that ARM could enter into with existing</p>	<p style="text-align: right;">Page 136</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 intellectual property without a license? 3 MR. MOONEY: Objection, 4 form. 5 A Well, again, to the extent 6 that there is a breach of contract within 7 the ecosystem, I would think that, yes, 8 that would have an impact on the 9 ecosystem as discussed here.</p> <p>10 Q And in the last sentence, it 11 says, "Specifically, Mr. Abbey stated 12 that as a person that spends a long time 13 negotiating contracts that covers things 14 like this, we spent time in meticulously 15 reviewing these agreements and making 16 sure these agreements are things we can 17 stand behind."</p> <p>18 It was your understanding 19 based on the record that before they 20 signed these contracts that ARM was 21 meticulously reviewing the agreements; 22 correct?</p> <p>23 A Again, that would generally 24 be my understanding. The one thing that 25 I think that's in play here to some</p>
<p style="text-align: right;">Page 135</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 or prospective partners."</p> <p>3 When you used the term may, 4 are you doing any assessment of 5 probability there?</p> <p>6 A I'm not. I'm not providing 7 an assessment of probability. Again, my 8 understanding is that these types of 9 harms would be likely to the extent that 10 the ecosystem is -- is not held intact.</p> <p>11 Q In paragraph 87, you're 12 quoting Mr. Abbey again.</p> <p>13 And in the third sentence 14 that begins, "Similarly, Mr. Abbey 15 stated," do you see that?</p> <p>16 A Yes.</p> <p>17 Q It says, "Similarly, 18 Mr. Abbey stated I think the fact that 19 Qualcomm -- they're using intellectual 20 property that's unlicensed to them -- has 21 huge implications for ARM's intellectual 22 property company."</p> <p>23 Do you think that risk 24 that's being described there would apply 25 anytime a company is using ARM's</p>	<p style="text-align: right;">Page 137</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 extent -- and I think I talk about this 3 in my report as it relates to Qualcomm -- 4 is just -- the size of Qualcomm is one of 5 the more significant licensees and the 6 impact that that has on the ecosystem 7 when we talk about other licensees, 8 compared to a company the size of 9 Qualcomm.</p> <p>10 Q So do you think the Qualcomm 11 contract was more meticulously reviewed 12 than other contracts?</p> <p>13 A I don't have an awareness of 14 that. I'm more referring to the idea 15 that to the extent that there is a breach 16 of contract, which causes ARM to lose 17 control of its intellectual property, 18 especially with one of the licensees the 19 size of Qualcomm and the impacts that 20 they have on the marketplace would be 21 very significant, maybe more so than 22 others.</p> <p>23 Q Do you have an opinion about 24 whether the impact would be more so than 25 others?</p>

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<p style="text-align: right;">Page 138</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A Well, I think that 3 throughout my report, I talk about the 4 size of Qualcomm and the impact that 5 Qualcomm has based upon, you know, even 6 whether Qualcomm and Nuvia -- with Nuvia 7 were to come out with Nuvia Cores, that 8 the marketplace would begin to shift to 9 and perhaps a shifting away from the ARM 10 technology that is currently in the 11 market. So I think there's just various 12 parts of my report, which I refer to the 13 size of Qualcomm, and the impact of 14 Qualcomm on the licensing ecosystem.</p> <p>15 Q The Qualcomm ALA -- I'm not 16 referring to the Nuvia ALA, I'm referring 17 to the Qualcomm ALA -- was in your 18 materials considered which would mean you 19 laid eyes on it. Is that something that 20 you reviewed in any detail?</p> <p>21 A Again, I reviewed it. It 22 wasn't something that I reviewed from a 23 legal standpoint to determine the metes 24 and bounds of the contract.</p> <p>25 Q And did you assume for</p>	<p style="text-align: right;">Page 140</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 will begin Media Unit 4. 3 Q So as part of your review of 4 evidence of the record in this case, have 5 you seen anything that would indicate 6 ARM's licensees or prospective licensees 7 expect that if ARM were to prevail in 8 this case that the court would award 9 specific performance, rather than 10 monetary damages?</p> <p>11 A Can you repeat that, please?</p> <p>12 Q Sure.</p> <p>13 As part of evidence of the 14 record in this case, have you seen 15 anything that would indicate that ARM's 16 licensees or prospective licensees expect 17 that if ARM were to prevail in this case 18 that the court would award specific 19 performance, rather than monetary 20 damages?</p> <p>21 A Well, while I cannot -- I 22 don't have an awareness of what ARM 23 licensees have or have not seen. I know 24 that there's certainly publicly available 25 information that's disseminated on this</p>
<p style="text-align: right;">Page 139</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 purposes of this case that [REDACTED] [REDACTED] [REDACTED] ALA license agreement?</p> <p>5 MR. MOONEY: Objection to 6 form.</p> <p>7 A Well, I assumed that there 8 is a breach. So if you're asking me 9 whether their conduct was or was not a 10 breach, I assume that.</p> <p>11 MR. ISAACSON: We're coming 12 up on 12:30 here. I don't know when 13 people want to eat. I'm flexible.</p> <p>14 THE WITNESS: I'm flexible 15 when you get to a stopping point.</p> <p>16 MR. ISAACSON: I'm about to 17 move to the next section.</p> <p>18 THE WITNESS: That's fine. 19 We could stop.</p> <p>20 THE VIDEOGRAPHER: This will 21 end Media Unit 3, going off the 22 record at 12:30.</p> <p>23 (A lunch recess was taken.)</p> <p>24 THE VIDEOGRAPHER: We're 25 back on the record at 1:21. This</p>	<p style="text-align: right;">Page 141</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 litigation at this point.</p> <p>3 Q Are you aware of any 4 publicly disseminated information that 5 suggests that ARM is seeking specific 6 performance and not monetary damages?</p> <p>7 A I may or may not have seen 8 information like that. I don't recall.</p> <p>9 Q And you haven't seen 10 anything that would suggest that ARM 11 licensees or prospective licensees have 12 any knowledge of what relief ARM is 13 seeking in this case, whether it be 14 specific performance or monetary damages; 15 correct?</p> <p>16 MR. MOONEY: Objection, 17 form.</p> <p>18 A While I can't tell you what 19 specific ARM licensees have seen or have 20 not seen, I have certainly seen 21 information in ARM public documents. 22 There's also certainly press releases out 23 there.</p> <p>24 To what degree that signals 25 to the market specific performance or</p>

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<p>Page 142</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 lack thereof, I don't have an awareness 3 of that. 4 Q So going back to your 5 opening report, page 40, the next 6 subsection, little 4, which is titled 7 "Third-Parties and End Users May Shift to 8 Nuvia-Based Cores," when you say may 9 shift, is this another instance where 10 you're not doing a probability assessment 11 when you're saying may shift? 12 A I'm not doing a probability 13 analysis. I'm basing my understanding 14 here on the record evidence. 15 Q And that record evidence is 16 set forth here in Footnotes 224 through 17 235 and includes your interviews, some 18 public available articles on Forbes, 19 publicly available articles on Forbes and 20 some Qualcomm and ARM documents. 21 A Well, it's deposition 22 testimony. 23 Q And deposition testimony; 24 correct? 25 A That's correct.</p>	<p>Page 144</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 [REDACTED] 3 [REDACTED] 4 [REDACTED] 5 [REDACTED] 6 [REDACTED] 7 [REDACTED] 8 [REDACTED] 9 [REDACTED] 10 [REDACTED] 11 [REDACTED] 12 [REDACTED] 13 [REDACTED] 14 [REDACTED] 15 [REDACTED] 16 [REDACTED] 17 [REDACTED] 18 [REDACTED] 19 When you say could have a 20 significant impact on ARM's financial 21 performance, is that another situation 22 when you say could have that you're not 23 making any assessment of the probability 24 of that happening? 25 A Well, I think I'm looking at</p>
<p>Page 143</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q In paragraph 91, which runs 3 over on to page 42, there's a discussion 4 of an internal Qualcomm May 22nd e-mail. 5 Do you see that? 6 MR. MOONEY: Objection to 7 form. 8 A Are you talking about the 9 first sentence of 91? 10 Q No. 11 If you move over to 12 page 42 -- 13 A Okay. 14 Q -- there's a reference four 15 lines down to an internal Qualcomm May 22 16 e-mail. 17 A Okay. I'm just reading it 18 now. Okay. 19 Q There, it says in your 20 report, [REDACTED] 21 [REDACTED] 22 [REDACTED] 23 [REDACTED] 24 What's your understanding of 25 how those savings are achieved?</p>	<p>Page 145</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 these statements in relationship to other 3 statements in the report and discussions 4 that I've had with ARM personnel. I'm 5 not offering a probability assessment 6 here, as much as I am offering my 7 understanding of the record evidence. 8 Q And on page 43, Subsection 9 5, "Existing and Prospective Licensees 10 May Shift Away from ARM Chips," when you 11 say may there, is that also a situation 12 where you are not making a probability 13 assessment when you say may? 14 A I'm not providing a 15 probability assessment here. I'm basing 16 my understanding here on the record 17 evidence, which is discussions with 18 Mr. Williamson, publicly available 19 information, as well as discussions with 20 ARM personnel more generally. 21 Q Subsection C of your report, 22 which is on page 45, is titled 23 "Significant Negative Impact on ARM's 24 First Mover Advantage." 25 And then it says in</p>

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<p style="text-align: right;">Page 146</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 paragraph 100, "ARM's loss of first mover 3 advantage could cause significant 4 detrimental effects," and then you list 5 some detrimental effects. 6 When you say could, is this 7 also a situation where you are not making 8 any assessment of the probability of this 9 happening? 10 A I'm not assessing 11 probabilities. I'm looking at the record 12 evidence as I understand it. 13 Q Are you referring to past 14 first mover advantages or future first 15 mover advantages or both when you say 16 first mover advantage? 17 MR. MOONEY: Objection, 18 form. 19 A Well, when I'm referring to 20 first mover advantage, I think there's 21 both past and future. So my 22 understanding is, is that there are other 23 markets that ARM has a desire to get 24 into. And there could be others that 25 develop in the future as well.</p>	<p style="text-align: right;">Page 148</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 enter into the server market based upon 3 its workings with Nuvia in order to enter 4 that market. 5 Q Let me go back to my 6 original question. I'll get to the ones 7 where they're seeking to achieve a first 8 mover advantage. 9 What market or market 10 segments did you consider ARM to have 11 already achieved a first mover advantage 12 as of the date of your report? 13 A So in paragraph 101, I 14 describe a statement from an ARM document 15 which says our CPUs initially gained 16 significant traction in mobile phones in 17 the mid-1990s because our energy 18 efficient processors provided an 19 appropriate level of performance while 20 consuming little power. 21 It goes on from there. So 22 certainly, mobile phones would be one 23 that I would identify ARM as having a 24 first mover advantage, as well as a 25 significant entrenchment.</p>
<p style="text-align: right;">Page 147</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q And what markets or market 3 segments do you consider ARM to have a 4 first mover advantage as of the date of 5 your report? 6 A Well, by way of example, I 7 understand that ARM was seeking to get 8 into the server market and also the 9 automotive market. And I understand that 10 given the actions of the defendant in 11 this case, I understand that those have 12 been at least chilled or stalled at this 13 point as ARM has lost control of its 14 intellectual property and its ability to 15 use that intellectual property in the 16 markets that it had sought to enter into 17 based upon Nuvia being acquired by 18 Qualcomm and Qualcomm repurposing Nuvia's 19 technology in PCs. 20 Q So did you understand that 21 as of the date of this report, that ARM 22 had achieved a first mover advantage in 23 the server market? 24 A My understanding of the date 25 of my report, that ARM was seeking to</p>	<p style="text-align: right;">Page 149</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Did you understand that the 3 alleged breach of the Nuvia ALA would 4 cause harm to ARM's first mover advantage 5 with respect to mobile phones? 6 A Well, to the extent that 7 Qualcomm were to repurpose the Nuvia 8 technology for use in mobile phones or 9 the market was to begin to adopt the 10 Nuvia platform in mobile phones, I 11 understood that it was a possibility. 12 Q Were there any other markets 13 in which you considered ARM to have 14 achieved a first mover advantage by the 15 time of your report, other than mobile 16 phones? 17 A Well, ARM talks about its 18 development in televisions, watches, 19 washing machines, cameras, factory 20 equipments and others undergoing the same 21 revolution, as well as PCs. 22 Q Did you consider ARM to have 23 achieved a first mover advantage in 24 television, watches, washing machines, 25 cameras, factory equipment?</p>

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<p style="text-align: right;">Page 150</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A I understood them to be, as 3 stated in my report, that their 4 innovation in the mobile phone revolution 5 was significant. Mainly with the help of 6 ARM technology, many additional devices 7 underwent the same revolution.</p> <p>8 Q Did you understand ARM to 9 have a first mover advantage in any of 10 those markets or market segments listed 11 there: Television, watches, washing 12 machines, cameras, factory equipment?</p> <p>13 A I understood them to have a 14 significant presence based upon the 15 technology that they have. And 16 ultimately, some of that being their 17 first mover advantage in bringing that 18 high technology to market.</p> <p>19 Q Did you understand ARM to 20 have a first mover advantage with respect 21 to computers?</p> <p>22 A I think that as it relates 23 to PCs more generally, I think their 24 focus in this case was to get into 25 servers. I don't know whether -- I don't</p>	<p style="text-align: right;">Page 152</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 CPUs which will come at the expense of 3 ARM's other licensees."</p> <p>4 When you say it will come at 5 the expense of ARM's other licensees, 6 then you've estimated that success as 7 representing 2 to \$4 billion in value -- 8 is that right? -- based on the record 9 that you've seen?</p> <p>10 MR. MOONEY: Objection to 11 form.</p> <p>12 A So as part of the rationale 13 for acquiring Nuvia, Qualcomm stated that 14 it did not possess the necessary skills 15 internally to meet the PC community means 16 acquisition as the fastest and best 17 alternative to address this space.</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 I think what that is 21 suggesting is -- that is suggesting the 22 amount that Qualcomm saved by not having 23 to develop its team over the course of 24 time, by identifying individuals and 25 getting them working on a solution to be</p>
<p style="text-align: right;">Page 151</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 know whether I have evidence or I've 3 heard anything as it relates to first 4 mover advantage in PCs, although I think 5 as I mentioned a few moments ago, ARM's 6 CPU architecture has resulted in the 7 proliferation and evolution of computers 8 as people know them today.</p> <p>9 Q You previously said that you 10 understood ARM would be seeking a first 11 mover advantage in server markets and 12 automotive markets.</p> <p>13 Are there any other markets 14 that you believed ARM was going to seek a 15 first mover advantage in?</p> <p>16 A Those are the two that stick 17 out to me that I believe I reference in 18 my report.</p> <p>19 Q In paragraph 105, it 20 says, "By acquiring Nuvia -- I'm sorry. 21 Are you at paragraph 105?</p> <p>22 A Yes.</p> <p>23 Q "By acquiring Nuvia, 24 Qualcomm gained an advantage by way of an 25 accelerating path to developing its own</p>	<p style="text-align: right;">Page 153</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 more competitive. If I recall, 3 Qualcomm's position was is that their 4 team, while they had an aptitude to some 5 degree, they were not the level of talent 6 necessary in order to be able to turn 7 around something that would be as useful 8 or relevant in the market. So acquiring 9 Nuvia allowed them to do that more 10 quickly.</p> <p>11 Then the problem arises with 12 by acquiring Nuvia, they were, in 13 essence, identifying the technology that 14 Nuvia and ARM had identified together and 15 repurposing it for situations that were 16 not called for in the agreement.</p> <p>17 So I don't know how -- I 18 don't know how that necessarily 19 represents a value that I've come up 20 with. [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 Q And, in fact, at page 49 25 after a long quote, you say that</p>

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<p style="text-align: right;">Page 170</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Nuvia's data center CPU that caused the 3 delay of ARM's entry into the market. 4 MR. MOONEY: When you were 5 saying ARM, were you referring to 6 Qualcomm as far as the acquiring 7 entity? 8 MR. ISAACSON: No. I did 9 say that. Let me start again. 10 Q Would you agree with 11 [REDACTED] [REDACTED] Qualcomm can certainly come</p>	<p style="text-align: right;">Page 172</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that Nuvia and ARM were at that point yet 3 of launching a product when Qualcomm came 4 in. So I would be speculating as to 5 whether or not that was, you know, kind 6 of where we are. What we know is that 7 there was a breach of the agreement. 8 And Qualcomm continues to 9 use the ARM technology, even after the 10 contract was terminated, sending a 11 message which would be impactful to the 12 ecosystem. When we talk again about 13 servers, this was a first mover advantage 14 opportunity for ARM to get into servers. 15 That was something I understood from my 16 discussions with ARM personnel which was 17 certainly meaningful to ARM as part of 18 their ecosystem.</p> <p>19 Q If you look at paragraph 117 20 of your report, you see the second 21 sentence?</p> <p>22 A I just want to make sure I 23 reorient myself as to where we are.</p> <p>24 Q It's page 56, paragraph 117.</p> <p>25 A 117, you said?</p>
<p style="text-align: right;">Page 171</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 in and purchase Nuvia. There's no 3 restriction on that. 4 My understanding is as a 5 layman, what the parties are arguing 6 about here is Qualcomm cannot come in and 7 take the technology that ARM licensed to 8 Nuvia and use it in ways that it was not 9 anticipated for under Qualcomm's 10 leadership without further negotiating 11 and coming to a resolution with ARM which 12 I understand never happened. 13 And as a result, there was a 14 termination of the contract, which my 15 understanding is Qualcomm disregarded and 16 began to move forward in any event. 17 Q Do you agree that Qualcomm's 18 acquisition of Nuvia, the abandonment of 19 Nuvia's data center made ARM's entry into 20 the data center market uncertain or 21 significantly delayed it? 22 MR. MOONEY: Objection, 23 form. 24 A I guess I don't have an 25 opinion on that because I don't believe</p>	<p style="text-align: right;">Page 173</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q Yes. 3 A Thank you. 4 Q In the second sentence, it 5 says, "With Qualcomm's acquisition of 6 Nuvia and the abandonment of Nuvia's data 7 center CPU, ARM's statements indicate 8 that its attempt to broaden its toehold 9 in the data center segment is uncertain 10 and significantly delayed." 11 Is that a statement you 12 still agree with? 13 A I do. 14 Q Page 57, this is Section E, 15 "Significant decrease in licensing 16 revenue and ARM's investment in research 17 and development." 18 Are you with me? 19 A I am. 20 Q In paragraph 120, you say, 21 "The significant decrease in ARM's 22 revenue and investment in research and 23 development and innovation." 24 And you go on to say that 25 that cannot be readily quantified.</p>

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<p style="text-align: right;">Page 174</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 The significant decrease in 3 ARM's revenue and investment in research 4 and development that you referred to 5 there, has any of that happened to this 6 date? 7 A I'm aware that I have 8 information on that, beyond my 9 understanding from discussions with 10 Mr. Williamson and ARM documents which 11 cite the importance of research and 12 development and the importance on 13 continued revenue generation because of 14 how quickly the market changes and reacts 15 to new technology introductions. So, 16 again, this is a prospective harm based 17 on the actions of Qualcomm and Nuvia in 18 this case. 19 Q And in paragraph 121, you 20 say, "ARM's loss of control of its 21 intellectual property and licensing 22 ecosystem." 23 When you say loss of 24 control, is that referring to a breach of 25 a license agreement?</p>	<p style="text-align: right;">Page 176</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Are you making any 3 probability assessment there about 4 whether ARM will actually reduce and in 5 future, its decreased investment in R&D? 6 A I'm not providing any 7 probability assessment here. 8 Q In paragraph 127, you 9 say, "ARM's R&D investments are tied to 10 its revenue stream. As such, any 11 significant changes to ARM's expected 12 revenues can impact ARM's future R&D 13 activities which, in turn, could lead to 14 further decline in revenue." 15 Looking at Figure 10 where 16 it says ARM, R&D as a percentage of 17 revenue, when you referred to significant 18 changes in ARM's expected revenue, can 19 you tell me the general magnitude of what 20 you mean by a significant change in 21 revenue? 22 A I don't know if I have a 23 sense of that. I think what I'm really 24 trying to show here is the very 25 significant percentage of ARM's revenue</p>
<p style="text-align: right;">Page 175</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 A This is referring to I think 3 the discussion throughout the report, 4 also, the breach in this particular case, 5 in which the impact that that would have 6 on the ecosystem in general of chilling 7 particular investments in ARM technology, 8 attempts to renegotiate for lower rates 9 because of additional risks. 10 Qualcomm's awareness that by 11 acquiring Nuvia and repurposing the 12 technology will allow it to save -- save 13 royalty dollars as part of that 14 acquisition are all just what I would say 15 exemplary of the types of impacts on 16 Nuvia's revenue and the ability to 17 redeploy revenue into research and 18 development dollars. 19 Q You say in paragraph 121, 20 "ARM's loss of control in intellectual 21 property and licensing ecosystem as 22 described above is likely to result in 23 decreased licensing revenue which would, 24 in turn, result in decreased investment 25 in R&D."</p>	<p style="text-align: right;">Page 177</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 that is redeployed into research and 3 development. 4 Again, from my discussions 5 with Mr. Williamson and Mr. Abbey, it's 6 clear to me that because they are a 7 company who depends on their intellectual 8 property, to the extent that they have an 9 impact on revenue and an impact on their 10 ecosystem, it does a number of things. 11 It might impact their ability to identify 12 and bring in very talented employees, 13 similar to what Qualcomm experienced. It 14 might lessen their ability to deploy 15 revenue back into the marketplace or miss 16 opportunities because the market moves 17 along so quickly in this space. 18 I think again, this is 19 really emblematic of the significant 20 amount of R&D that it takes in order to 21 maintain a leadership position in this 22 market. 23 Q Have you done any assessment 24 of what decrease in revenue would result 25 in what reduction in R&D investment by</p>

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<p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 ARM?</p> <p>3 A I have not. I have not 4 assessed that, outside of, again, the 5 discussions that I've had with ARM 6 personnel and review of documents which 7 identify that revenue and R&D are linked. 8 And any prospective negative impact on 9 the ecosystem could harm that.</p> <p>10 Q And on paragraph 127 at the 11 bottom of page 59 and 60, there's a 12 number of single-spaced bullet points. 13 Do you see that?</p> <p>14 A I do.</p> <p>15 Q And those are quotes from 16 ARM's public filings with the SEC; right?</p> <p>17 A Well, I think I don't want 18 to -- I won't disagree with you, other 19 than to say the purpose of those is 20 there's deposition testimony of a man 21 named Mr. Segars, who testified that 22 unless ARM has the engineering firepower 23 to keep its products competitive, then 24 its role in the broader semiconductor 25 ecosystem is at risk of fading.</p>	<p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 deposition. And you're asking me 3 questions.</p> <p>4 MR. MOONEY: Counsel, can 5 you let the witness finish?</p> <p>6 MR. ISAACSON: I'm trying 7 not to use the whole day. And when 8 I'm asking if something came from an 9 SEC document, and I get a long 10 answer, that's not helping any of us.</p> <p>11 MR. MOONEY: Let me finish 12 what I'm saying --</p> <p>13 MR. ISAACSON: And I don't 14 mean to interrupt you. Sorry.</p> <p>15 MR. MOONEY: I appreciate 16 it. It'll make it easier for the 17 court reporter if you could let the 18 witness finish what he's saying 19 before asking the next question.</p> <p>20 We're doing pretty well.</p> <p>21 A So, again, what I was 22 getting at here is there's something that 23 was identified as a knock-on effect in a 24 deposition of Mr. Segars. Mr. Segars 25 identified the relationship between R&D</p>
<p>Page 179</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 Q All I've asked is whether 3 those are quotes of ARM's public filings. 4 A I know you did. And I'm 5 providing some background. 6 Q I'm not looking for 7 background on that. I just want to do it 8 and move on.</p> <p>9 MR. MOONEY: Counsel, just 10 let him finish the response.</p> <p>11 A That's fine. If you want an 12 incomplete answer, that's fine. That's 13 part of my analysis in this case as 14 reflected in paragraph 127 and onward.</p> <p>15 Q And all of those risk 16 factors, those are risk factors 17 identified in the SEC document; correct?</p> <p>18 A Well, again, I think it's 19 more than that. And so I'd like to 20 answer the question.</p> <p>21 Q If you think it's more than 22 that, tell me that.</p> <p>23 A I will. That was the point 24 of my first discussion before you cut me 25 off and told me to stop because this is a</p>	<p>Page 181</p> <p>1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL 2 and revenue. And what these particular 3 points are set forth to do is to identify 4 that even within public filings where ARM 5 is going to market and communicating with 6 the marketplace more broadly, they are 7 illustrating the relationship between 8 maintaining revenue and the impact of 9 dipping revenue in a knock-on effect of 10 continued R&D redeployment.</p> <p>11 Q Page 61, Section F, 12 "Significant Decrease in ARM's Reputation 13 and Goodwill."</p> <p>14 A Okay.</p> <p>15 Q The significant decrease in 16 ARM's reputation and goodwill, is that 17 harm that has taken place already or is 18 this a future harm?</p> <p>19 A This would be a prospective 20 harm based upon the impact on the 21 ecosystem, to the extent that it is 22 determined or seen within the marketplace 23 that ARM licensees can use ARM's 24 technology in unexpected ways or 25 unlicensed ways that are inconsistent</p>

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1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL	1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL
2 Nuvia ALA.	2 vet this.
3 Do you see that in	3 MR. ISAACSON: Let's take a
4 paragraph 46?	4 break. And I'm probably done.
5 MR. MOONEY: Objection.	5 THE VIDEOGRAPHER: This will
6 A Okay. I've read 46.	6 end Media Unit 5, going off the
7 Q Did you analyze, other than	7 record at 3:38.
8 the Nuvia TLA, any agreements in looking	8 (A short recess was taken.)
9 in this section to value the new features	9 THE VIDEOGRAPHER: We're
10 in the CMN 700?	10 back on the record at 3:51. This
11 A Which agreements are you	11 will begin Media Unit 6.
12 referring to?	12 (Continued on the following page.)
13 Q Any other license	13
14 agreements.	14
15 A I'm not aware what license	15
16 agreements you're referring to.	16
17 Q In paragraph 54, you	17
18 say, "In any event, Dr. Kennedy ignored	18
19 testimony from Mr. Larri, related to the	19
20 time it took ARM to develop features	20
21 requested by Nuvia."	21
22 What's your understanding of	22
23 what Mr. Larri's previous experience was	23
24 in working on Coherent Mesh Network	24
25 products?	25
Page 223	Page 225
1 WILLIAM TODD SCHOETTELKOTTE -- CONFIDENTIAL	1
2 A Are you asking what my	2
3 understanding of his experience is with	3
4 CMN?	4
5 Q Yes.	5
6 A I may have seen it in his	6
7 deposition. I don't recall as I sit here	7
8 what the extent of his experience was.	8
9 (The above-referred-to	9
10 document was marked as QX Exhibit 268	10
11 for identification, as of this date.)	11
12 Q Exhibit 268 is the expert	12
13 reply report of Patrick Kennedy,	13
14 June 24th, 2024.	14
15 Did you have a chance to	15
16 review this report?	
17 A Not in great detail, no.	
18 Q Have you done work to form	
19 any new opinions based on this report?	
20 A I have not.	
21 Q You have not done any work	
22 to, for example, form any opinions that	
23 would be critical of this report?	
24 A Well, not at this time.	
25 Again, I have not had a chance to fully	
	WILLIAM TODD SCHOETTELKOTTE
	16
	17
	18 Subscribed and sworn to
	19 before me on this _____ day
	20 of _____, 2024.
	21
	22 NOTARY PUBLIC
	23
	24
	25

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<p>1 2 I N D E X 3 E X A M I N A T I O N 4 EXAMINATION 5 Mr. Isaacson 5 6 E X H I B I T S 7 8 QX Description Page 9 QX Exhibit 255 Expert report 6 10 QX Exhibit 256 Reply expert 6 report 11 12 QX Exhibit 257 Reply expert 6 report 13 QX Exhibit 258 License agreement 27 14 QX Exhibit 259 Expert report 76 15 QX Exhibit 260 Proposal 186 16 QX Exhibit 261 Table 191 17 QX Exhibit 262 Table 193 18 QX Exhibit 263 Slides 196 19 QX Exhibit 264 Slides 200 20 QX Exhibit 265 Royalty Forecast 200 21 QX Exhibit 266 Slides 202 22 QX Exhibit 267 Chart 202 23 QX Exhibit 268 Expert report 223 24 25</p>	<p>Page 226</p> <p>1 ERRATA SHEET VERITEXT/NEW YORK REPORTING, LLC 2 3 CASE NAME: Arm Ltd. v. Qualcomm Inc., Et Al. 4 DATE OF DEPOSITION: 7/2/2024 WITNESSES' NAME: William Todd Schoettelkotte 5 PAGE LINE (S) CHANGE REASON 6 _____ _____ 7 _____ _____ 8 _____ _____ 9 _____ _____ 10 _____ _____ 11 _____ _____ 12 _____ _____ 13 _____ _____ 14 _____ _____ 15 _____ _____ 16 _____ _____ 17 _____ _____ 18 _____ _____ 19 _____ _____ 20 _____ _____ 21 22 William Todd Schoettelkotte SUBSCRIBED AND SWORN TO BEFORE ME THIS ____ DAY OF _____, 20____. 23 24 25 (NOTARY PUBLIC) MY COMMISSION EXPIRES:</p>
<p>1 2 C E R T I F I C A T I O N 3 4 5 I, ANTHONY GIARRO, a Shorthand Reporter 6 and a Notary Public, do hereby certify that 7 the foregoing witness, WILLIAM TODD 8 SCHOETTELKOTTE, was duly sworn on the date 9 indicated, and that the foregoing, to the 10 best of my ability, is a true and accurate 11 transcription of my stenographic notes. 12 I further certify that I am not 13 employed by nor related to any party to this 14 action.</p> <p>15 16 17</p> <p></p> <p>18 ANTHONY GIARRO 19 20 21 22 23 24 25</p>	<p>Page 227</p>

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EXHIBIT 5

Exhibit 99.2



Arm will be hosting a conference call via an audio webcast to discuss earnings at 14:00 Pacific Time (17:00 Eastern Time, 22:00 GMT) on Wednesday, November 8, 2023. A replay of and a transcript of the call will be available the following day.

The webcast and replay can be accessed at: <https://edge.media-server.com/mmc/p/k879zaca>

Dear Shareholder,

It is such a thrill to write our first quarterly shareholder letter as a public company once again. These letters will update investors on Arm's progress and provide details about the quarter in advance of our earnings calls, maximizing time available for Q&A.

Certainly, the highlight of the quarter was the Arm IPO on September 14, when we listed on the Nasdaq Global Select Market. This was a historic event for the company and its employees, one that we celebrated across all our offices around the globe. Arm has been developing leading technology for more than 30 years, and we are delighted that you, our shareholders, will be joining us on the journey ahead. I am so proud of what we accomplished to get us to this point, however this is just the beginning. The best is yet to come.

Quarterly Highlights

- Revenue increased 28% year-over-year, topping \$800 million for the first time, reinforcing that our diversified business strategy is showing real results.
- The better than expected revenue was driven by multiple high-value long-term license agreements signed with industry leading technology companies, and royalty revenue benefiting from market share gains and higher royalty rates.
- The immediate need for companies to increase investment in Artificial Intelligence (AI) across all end markets helped drive license revenue up 106% year-over-year.
- The ongoing requirement for power efficient solutions in infrastructure and automotive continued to drive double digit royalty growth in those markets.
- Non-GAAP operating profit increased 92% year-over-year to \$381 million resulting in a 47.3% non-GAAP operating margin.
- Addressing the demand for reduced development time and decreased time to market, Arm announced the Arm® Neoverse™ Compute Subsystems, for companies developing differentiated chips for cloud compute.
- 7.1 billion Arm-based chips were reported as shipped, taking the cumulative total to 272.5 billion.
- New Arm-based energy-efficient AI capable products were announced by Google, Meta, Nvidia, Renesas, Xiaomi, and many more, as Arm takes AI everywhere.

"Following our successful IPO, Arm is off to an outstanding start as a public company with record revenue fueled by the success of our diversified business," said Rene Haas, CEO. "Licensing revenue was up over 100% year-over-year as the demand for AI has kicked off increased investment across all end markets. Our royalty revenue benefited from market share gains in automotive and cloud compute as our latest technologies, such as Armv9, increased penetration across all markets where AI is driving the need for our unique combination of performance and power efficiency."



Results for Q2 fiscal year ending 2024

Today, we are pleased to share results for the second quarter of fiscal year ending 2024 (Q2 FYE24), which ended September 30, 2023.

Financial Metrics

\$million, unless stated	GAAP			Non-GAAP (1)		
	Q2 FYE24	Q2 FYE23	Y/Y %	Q2 FYE24	Q2 FYE23	Y/Y %
Total revenue	806	630	28%	806	630	28%
License and other revenue	388	188	106%	388	188	106%
Royalty revenue	418	442	(5)%	418	442	(5)%
Cost of goods sold	(46)	(25)	84%	(26)	(24)	8%
Gross profit	760	605	26%	780	606	29%
<i>Gross margin (%)</i>	94.3%	96.0%		96.8%	96.2%	
Operating expenses	(916)	(422)	117%	(399)	(408)	(2)%
Operating profit (loss)	(156)	183	(185)%	381	198	92%
<i>Operating margin (%)</i>	(19.4)%	29.0%		47.3%	31.4%	
Net income (loss)	(110)	114	(196)%	380	178	113%
Diluted earnings per share (\$)	(0.11)	0.11	(200)%	0.36	0.17	112%
Free cash flow				169	33	412%

(1) For more information, definitions, and reconciliations of Non-GAAP measures see the “Key Financial and Operating Metrics” section below.

Non-Financial Metrics (1)

	Q2 FYE24	Q2 FYE23	Y/Y %
Annualized contract value ("ACV")	\$1,108 million	\$1,080 million	3%
Remaining performance obligations ("RPO")	\$2,414 million	\$1,751 million	38%
Arm Total Access licenses	22	13	69%
Arm Flexible Access licenses	212	194	9%
Chips reported as shipped	7.1 billion	7.5 billion	(6)%
Total number of employees	6,629	5,679	17%
Engineers as a percentage of total employees	80%	79%	

(1) For more information and definitions of Non-Financial Metrics see the “Key Financial and Operating Metrics” section below.

We didn't just have the IPO to celebrate in Q2 FYE24, it was also a great quarter financially, operationally and strategically, demonstrating the strength of our diversified business and AI driving demand for new Arm technology.

Financially, Arm is announcing our highest ever quarterly revenue, over \$800 million for the first time in our history, up 28% year-over-year, exceeding the growth seen by many of our peers in the semiconductor industry. Revenue exceeded expectations at the beginning of the quarter, and is primarily due to multiple high-value, long-term license agreements signed with industry leading technology companies who are developing chips across all of our target markets. This drove very strong growth in our licensing and other revenue, up 106% year-over-year. Much of this license revenue growth was enabled by the Arm Total Access business model, which provides customers with access to a wide range of Arm central processing units (CPUs) and related technologies. We have seen strong demand for higher-performance CPUs as companies look to capture the increasing demand for AI, from cloud servers to smartphones to automotive applications. Royalty revenue was down 5% year-over-year, with lower sales of chips for smartphones being offset by growth in other target markets such as cloud compute and automotive applications. Additionally, our overall royalty revenue is benefiting from higher royalty rates as Armv9 penetration increases.

Operationally, Arm continued to increase investments in R&D to meet the demand for more compute capability from across the industry and to execute on our broadening product roadmap. Overall headcount increased by 17% year-over-year, with more than 85% of the net new hires going into engineering roles. The cost associated with this increase in headcount was offset by several one-off items, resulting in non-GAAP operating expenses declining by 2% year-over-year. With revenue growing strongly and costs declining, non-GAAP operating profits have increased by 92%, delivering a 47.3% non-GAAP operating margin.

Strategically, Arm continues to lead on innovation and during the quarter we announced the Arm Neoverse Compute Subsystems (CSS), a faster, more efficient path to delivering custom-built chips for AI, cloud servers, 5G base station equipment, and other infrastructure applications. And then shortly after the end of the quarter, we announced Arm Total Design for Neoverse CSS which engages critical ecosystem partners to help accelerate the development of Arm Neoverse-based chips.

Guidance

Looking forward, we have good visibility into our licensing pipeline for the second half of the fiscal year, although there is uncertainty regarding the exact timing of some deals and the revenue recognition profiles for future agreements are subject to change. Industry analysts forecast that the semiconductor industry is starting to recover, which can benefit our royalty revenue, however the trajectory of the recovery is not clear, and the industry remains vulnerable to changes in the external macroeconomic environment.

	Q3 FYE24	FYE24
Revenue	\$720m - \$800m	\$2,960m - \$3,080m
Non-GAAP operating expense (1)	~\$460m	~\$1,765m (2)
Non-GAAP fully diluted earnings per share (1)	\$0.21-\$0.28	\$1.00 - \$1.10

(1) For more information and definitions of the Non-GAAP measures see the "Key Financial and Operating Metrics" section below. A reconciliation of each of the projected non-GAAP operating expense and non-GAAP fully diluted earnings per share, which are forward-looking non-GAAP financial measures, to the most directly comparable GAAP financial measure, is not provided because Arm is unable to provide such reconciliation without unreasonable effort. The inability to provide each reconciliation is due to the unpredictability of the amounts and timing of events affecting the items we exclude from the non-GAAP measure.

(2) Our FYE24 non-GAAP operating expense guidance includes a one-time increase in social security taxes of approximately \$45m in the fourth quarter, related to the vesting of certain equity awards following our IPO.



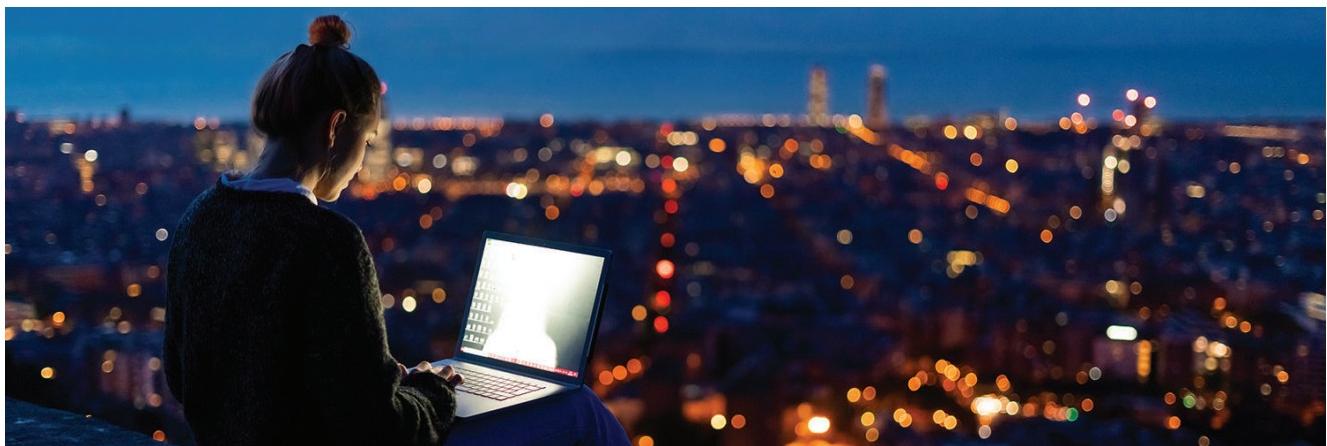
Our strategy to take artificial intelligence everywhere

Arm is central to the acceleration of AI and Machine-Learning (ML) workloads to computers everywhere. Whether its large language models being trained in the cloud or inference models being deployed at the edge, the need for efficient computing resources has never been more important. All AI algorithms need CPUs to run their models and our strategy is to develop the CPUs and related technologies needed to run these algorithms in the most energy efficient manner. Arm is making rapid progress in the adoption of its technology with AI acceleration in its CPUs and GPUs, and AI-specific products such as the Arm Ethos™ neural processing unit (NPU).

Arm is continuing to see demand from companies needing access to higher-performance CPUs, GPUs and other technologies, and to develop AI capable chips for a wide range of end markets. During the quarter, Arm signed multiple licenses for its latest products with companies that are designing chips requiring advanced AI capability for applications such as autonomous driving, cloud servers, consumer electronics, Internet of Things (IoT) and smartphones. This included a leading autonomous automotive OEM licensing additional Arm CPU and GPU IP as they develop the next generation of their Arm-based autonomous vehicle platform.

During Q2 and early Q3 our partners made the following announcements regarding AI capable devices:

- **Nvidia** GH200 Grace Hopper Superchip, which combines our Arm-based Grace CPU with the Hopper GPU, a case study for the need for energy-efficient compute for AI training and inference.
- **Renesas** announced its New Ultra-High Performance MCUs that include Arm Helium Technology to boost AI performance on edge and end-point devices.
- **Meta** and Arm announced a collaboration demonstrating PyTorch models running natively on Arm CPUs and NPUs, paving the way for easy deployment of PyTorch models at the edge.
- **Google's** new Tensor G3 chip has been upgraded to support on-device generative AI, and includes the latest and most powerful mobile CPU, the Arm Cortex™-X4.
- The new **Xiaomi** 14 and 14 Pro will use Qualcomm's Snapdragon 8 Gen 3, which is also based on Arm Cortex-X4 CPU, and will run generative AI directly on the handset.
- **Google** and **Qualcomm** partnering to bring generative AI experiences to all Android phones, running the algorithm on a combination of the Arm CPU and accelerator.



Arm growing share in our target markets

Arm is making significant progress across its target end markets, with new product and ecosystem announcements, market leaders licensing Arm technology for their next chips, design wins at major OEMs, and with the latest Arm technology being deployed into high-volume applications.

Cloud Compute

Arm continues to gain market share within the cloud compute market as our customers increasingly adopt and deploy Arm CPUs into their cloud server chips driven by the need for power efficient computing. We are licensing our Neoverse CPU and Compute Subsystem technologies to both Cloud Service Providers (CSPs) and semiconductor companies developing chips for CSPs, and are continuing to invest in the software and developer ecosystem to make it easiest to develop chips and software for Arm-based cloud infrastructure.

During the quarter and in early Q3, we made several announcements to drive our strategy forward, including:

- Arm Neoverse CSS, a faster, lower-risk path to custom-built SoCs for infrastructure, but still allowing partners to retain flexibility to focus on innovation and differentiation.
- Arm Total Design, an ecosystem committed to frictionless delivery of custom SoCs based on Neoverse CSS that includes leading ASIC design houses, IP vendors, EDA tools providers, foundries and firmware developers - partners include Broadcom, Cadence, Intel Foundry Services, Socionext, Synopsys and TSMC.

Automotive

The automotive semiconductor market is one of Arm's fastest growing opportunities and where we have been rapidly gaining market share. Arm's strategy is to have our Automotive Enhanced (AE) CPUs and GPUs adopted as a platform for the software defined vehicle, and to have Arm technology designed into the next generation in-vehicle infotainment (IVI) systems, advanced driving assistance system (ADAS) products, and electronic control units (ECUs) at leading automotive OEMs and suppliers.

During the quarter, a leading automotive technology developer as well as a semiconductor customer who has recently entered the automotive ADAS chip market, both licensed a wide range of Arm's automotive enhanced CPUs and GPUs to gain access to the existing Arm automotive developer ecosystem.

After the end of the quarter,

- Renesas unveiled the fifth generation of its R-Car family of chips, including two new Arm-based MCU product lines providing solutions that meet the high computing performance and real-time processing requirements of the future automotive market. Renesas has committed to supporting market demands and making Arm-based products available to its customers.
- NXP announced the S32M2 motor controller series of automotive solutions, based on the Arm Cortex-M family of processors, and targeting energy-efficient functions within an electric vehicle.

Together, Renesas and NXP are the two largest automotive MCU providers, and by choosing to use Arm CPUs, system developers will be able to take advantage of the vast Arm software ecosystem within the automotive market.



IoT/Embedded

Arm is already the leading CPU architecture for IoT devices and embedded computers. One of the Arm Total Access agreements signed this quarter was with a major semiconductor company developing high-performance embedded computing chips. In addition, Arm signed a license for high-performance processors to a company developing satellite and ground unit communications.

Shortly after the end of the quarter, Renesas announced the world's most powerful family of microcontrollers, the RA8 series, based on the Arm Cortex-M85 processor. The Cortex-M85 integrates Arm Helium technology which provides a 4x performance acceleration for machine learning algorithms and is essential as AI becomes increasingly important in edge and end-point devices.

Smartphone

Interest in high performance, pervasive Arm compute in smartphone and consumer electronics only continues to grow. Arm's strategy is to develop and license more advanced technology such as CPUs based on its Armv9 architecture, and platforms that deliver additional functionality, higher performance, and higher energy efficiency in mobile and consumer computing devices. Arm's customers and end device consumers continue to demand these latest and greatest advances.

During the quarter, Arm signed multiple high-value, long-term licenses with leading OEMs and semiconductor companies developing chips for consumer electronics products, including the two new Arm Total Access agreements.

For Q2 FYE24, analyst reports indicate that shipments of smartphone handset were down approximately 5% year-over-year, and this was reflected in lower royalty revenue recognised. However, industry analysts are beginning to see signs of recovery in smartphone sales, with fiscal Q2 shipments up approximately 7% sequentially from Q1.

During the quarter and in early Q3,

- Mediatek announced the Dimensity 9300, its latest mobile chip with a one-of-a-kind All Big Core design targeting flagship smartphones. The Dimensity 9300 is powered by four Arm Cortex-X4 cores, four Arm Cortex-A720 cores and Arm Immortalis™-G720. It is designed for significantly improved performance for on-device generative AI processing, including running large language models on a smartphone.
- Microsoft introduced new services for app developers to accelerate the porting and optimization of apps and programs to run on natively on Arm-based Windows devices.

Financial Overview

(US GAAP unless otherwise stated)

Industry context

Semiconductors are indispensable to everyday life. In today's technology-driven world, semiconductors are the enablers of the devices and infrastructure that facilitate virtually everything people do. As consumers and enterprises continue to demand more from their devices, and as new technologies, such as AI, create new markets and use cases, the pervasiveness of high-performance and energy-efficient semiconductors will continue to expand for decades to come.

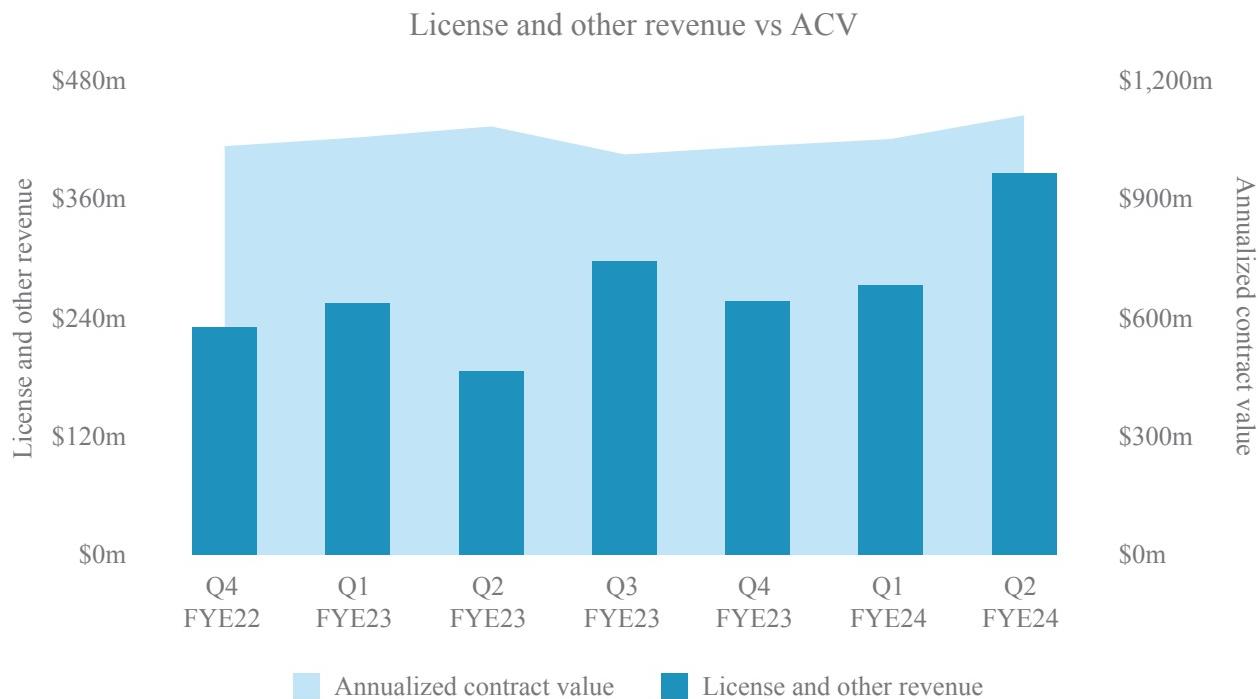
The semiconductor industry has declined for the past several quarters driven by an inventory correction; OEMs stock-piled large numbers of chips following shortages during the pandemic, and as end-market demand weakened OEMs reduced their purchases of new chips in order to deplete their existing inventories. This inventory correction has primarily impacted consumer electronic products such as PCs, laptops and smartphones, as well as industrial equipment and IoT devices. While recent reports from industry analysts suggest that the industry has started to show signs of recovery, the trajectory of the recovery remains uncertain.

Total revenue

Total revenue in Q2 FYE24 was \$806 million, an increase of 28% from the same period in the prior year, with strong license and other revenue more than offsetting a small decline in royalty revenue. This is better than we had expected at the beginning of the quarter, and is primarily due to multiple high-value, long-term license agreements signed with leading technology companies who are developing chips across all of our target markets from premium smartphones to servers to IoT devices.

License and other revenue

License and other revenue for Q2 FYE24 was \$388 million, up 106% year-over-year. While this strong growth was the result of continuing demand for the latest Arm technology, it's important to remember that the application of accounting standards can result in significant portions of multi-year licensing contracts to be recognized as revenue immediately, often as much as half of a deal's total value. As this dynamic can cause revenue volatility period-to-period, we believe it is helpful to evaluate our licensing and other revenue growth in conjunction with our other reported metrics of annualized contract value ("ACV") and remaining performance obligations ("RPO"). ACV evenly spreads the committed licensing fees over the duration of the contract, while RPO reflects the value of contracts that have been signed and which remain to be recognized as license and other revenue in future periods.

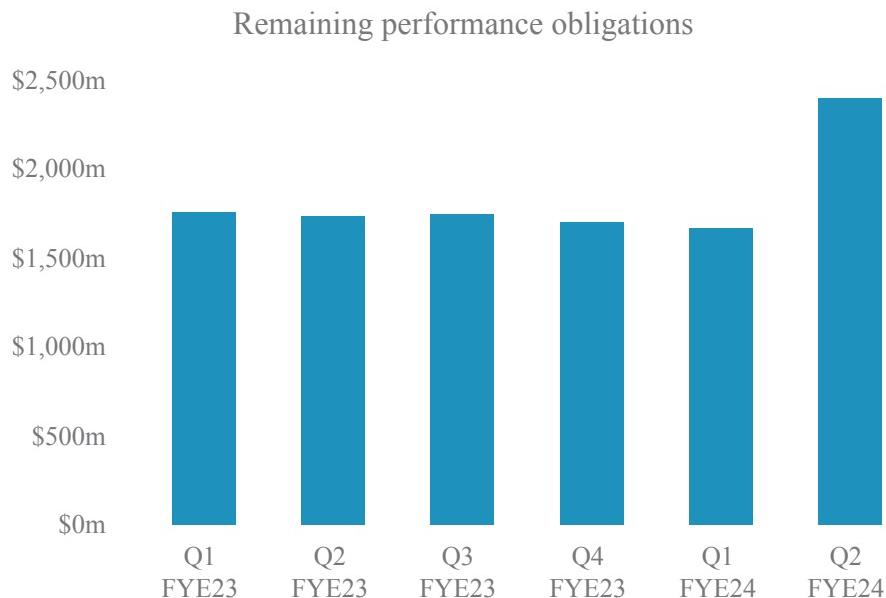


Annualized contract value

We define annualized contract value as the total annualized committed fees, excluding any potential future royalty revenue, for all signed agreements deemed to be active through the last day of each applicable reporting period. ACV at the end of Q2 FYE24 was \$1,108 million, up 3% year-over-year and up 6% sequentially. The sequential growth was our strongest over the last eight quarters and was primarily driven by the high-value license deals, especially Arm Total Access agreements, signed with major technology companies.

Remaining performance obligations

Remaining performance obligations represent the transaction price allocated to performance obligations that are unsatisfied, or partially unsatisfied, which includes unearned revenue and amounts that will be invoiced and recognized as license and other revenue in future periods. As of the end of Q2 FYE24, RPO was \$2,414 million, up 38% year-over year and up 44% sequentially, driven by the high-value license deals and the renewal of a long-term customer agreement. We expect to recognize approximately 28% of RPO as revenue over the next 12 months, 21% over the subsequent 13-to 24-month period, and the remainder thereafter.



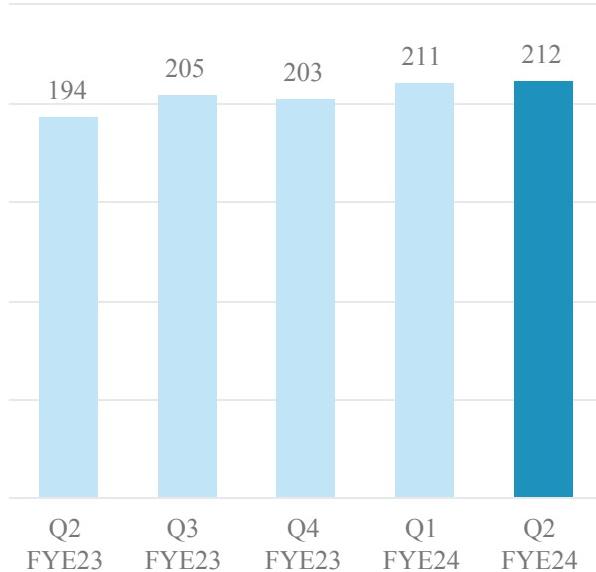
Licenses signed

During the quarter, Arm signed two additional Arm Total Access agreements, taking the total number of extant licenses to 22, which includes more than half of our top 20 customers. The two new Arm Total Access agreements were signed with a leading OEM developing their own chips and a leading semiconductor company, both targeting smartphones and consumer electronics devices, as well as other markets. In addition, Arm signed two extensions for existing Arm Total Access agreements. Arm Total Access agreements are typically multi-year commitments to Arm CPUs and related technologies, and many of Arm's long-term customers now have Arm Total Access agreements; 17 of the 22 have been Arm customers for more than a decade, demonstrating the enduring nature of the Arm architecture.

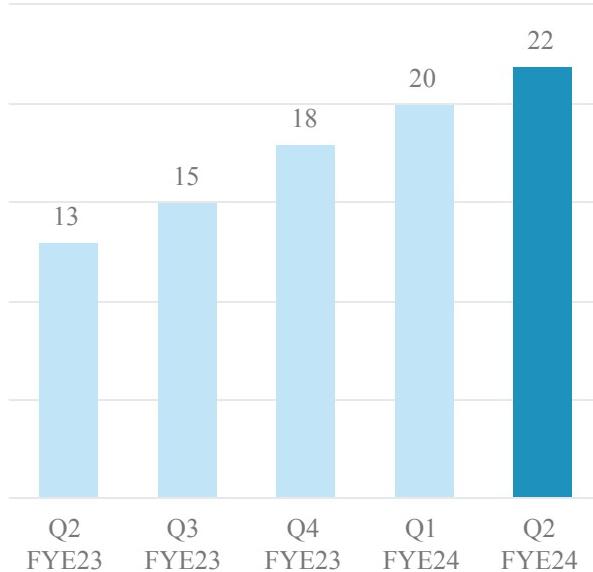
The Arm Flexible Access program enables startups to take advantage of the benefits of the broad Arm ecosystem as they enter into new markets. These agreements need to be renewed annually, and in Q2 the company had over 40 renewals and 18 new agreements signed, leading to one net addition, bringing the total number of extant licensees to 212¹. The companies that renewed existing agreements or signed new agreements during the quarter are developing products for a wide range of applications including multiple AI accelerators, augmented reality headset, automotive application, sensors, wearables, and wireless communication equipment.

¹ For the quarter ending June 30, 2023 (Q1 FYE24), the number of Flexible Access agreements has been corrected to 211 from 214 (as previously reported in Arm's final prospectus (IPO Prospectus) filed on September 14, 2023 with the U.S. Securities and Exchange Commission pursuant to Rule 424(b)(4) under the Securities Act of 1933, as amended, relating to our Registration Statement on Form F-1) to account for certain customer license terminations and a consolidation of customer licenses due to an acquisition.

Arm Flexible Access



Arm Total Access



Royalty revenue

Royalty revenue was \$418 million, down 5% year-over-year, reflecting the ongoing weakness in the smartphone market, offset by relative strength in other growth markets such as cloud compute and automotive applications.

Looking into the details and based on our analysis:

- **Smartphone:** Royalty revenue was negatively impacted by the high levels of smartphone chip inventory that had been built up in prior quarters, partially offset by higher royalty rates from smartphones using chipsets based on our latest Armv9 architecture.
- **Cloud Compute:** Royalty revenue grew double-digits, benefiting from ramping cloud compute chips and higher royalty rates from Armv9-based chips; infrastructure continues to be the fastest growing area for Arm.
- **Automotive:** Automotive continues to deliver very strong quarters with royalty revenue from ADAS more than doubling on the same period a year ago.
- **IoT/Embedded:** Royalty revenue from the IoT market was approximately flat as the market goes through inventory corrections due to soft end-market demand.

During the quarter, Arm's customers reported that they had shipped 7.1 billion Arm-based chips in the prior period. This is a reduction of 6% year-over-year, reflecting the weakness in high volume markets such as IoT and embedded applications, offset by growth in higher-value, but lower-volume markets such as cloud servers and automotive chips. This takes the cumulative number of Arm-based chips shipped to more than 272.5 billion.

Gross profit and margin

Cost of sales in Q2 FYE24 were \$46 million, resulting in a Gross Profit of \$760 million and a 94.3% Gross Margin. Non-GAAP cost of sales were \$26 million, resulting in a non-GAAP Gross Profit of \$780 million and a 96.8% Gross Margin.

Operating expense and margin

Total operating expense in Q2 FYE24 was \$916 million, including \$490 million of share-based compensation cost (equity-settled) and \$27 million for costs associated with the recent Arm IPO. Total non-GAAP operating expense of \$399 million was down 2% year-over-year, due to a combination of a \$40 million favorable reversal of a litigation provision, and a change in mix of share-based compensation from primarily cash-settled (or liability-classified) in Q2 FYE23, to primarily equity-settled in Q2 FYE24, which benefited the year-over-year non-GAAP comparison. For more detail on share-based compensation cost see table in GAAP to Non-GAAP Reconciliation.

Research and development (R&D) expense was \$626 million, representing 77.7% of revenue. Non-GAAP R&D expense was \$283 million, representing 35.1% of revenue, and up 13% year-over-year. Growth was driven by an 18% increase in engineering headcount, offset by the change in mix of share-based compensation cost from cash-settled to equity-settled.

Selling, general and administrative (SG&A) expense was \$290 million, representing 36.0% of revenue. Non-GAAP SG&A expense was \$116 million, representing 14.4% of revenue, down 27% year-over-year primarily due to the reversal of the litigation provision.

GAAP operating profit showed a loss of \$156 million compared with a profit of \$183 million for the same period a year ago. The increase in revenue was more than offset by the investment in engineering, higher share-based compensation costs and IPO-related costs. These items were partially offset by the reversal of the litigation provision.

Non-GAAP operating profit of \$381 million was up 92% year-over-year and represents a 47.3% non-GAAP operating margin, compared with 31.4% for the same period last year.

Total share-based compensation cost (equity-settled) was \$509 million with \$19 million in cost of sales, \$343 million in R&D and \$147 million in SG&A. Share-based compensation costs were higher in Q2 than is expected in future quarters as the IPO triggered a one-time expense for previously granted shares. The future run-rate of share based compensation cost will depend on a number of factors, including the share price, but is currently expected to be between \$150 million to \$200 million per quarter.

For Q2 FYE23, adding back cash-settled share-based compensation cost of \$47 million would have resulted in non-GAAP operating profit for the period of \$245 million. For Q2 FYE24, excluding the favorable reversal of the litigation provision of \$40 million and adding back cash-settled share-based compensation cost of \$9 million would have resulted in non-GAAP operating profit for the period of \$350 million, a 43% year-over-year increase in underlying non-GAAP operating profit and representing a 43.4% non-GAAP operating margin.

Income before income tax, taxation, share count and earnings per share

Income before income tax in Q2 FYE24 showed a loss of \$119 million compared with a profit \$152 million in Q2 FYE23. Non-GAAP Income before income taxes was \$423 million, up 86% year-over-year.

The Company's effective tax rate for the quarter was 7.6% (non-GAAP 10.2%), which benefited from the one-time higher share-based compensation cost and its impact on profitability in the quarter. We expect the non-GAAP effective tax rate to be in the mid-teens on a go-forward basis.

Net income in Q2 FYE24 showed a loss of \$110 million compared with a profit of \$114 million in Q2 FYE23. Non-GAAP net income was \$380 million, up 113% year-over-year.

Q2 FYE24 fully diluted earnings per share showed a loss of \$0.11 per share (non-GAAP showed an income of \$0.36 per share) compared with Q2 FYE23, which showed an income of \$0.11 (non-GAAP showed an income of \$0.17 per share).

On a GAAP basis, due to our loss position in the quarter, both basic and diluted shares were the same at 1,025,312,845 because including equity-classified awards would have been anti-dilutive. On a non-GAAP basis our fully diluted share count was 1,042,978,494.

Free cash flow

Non-GAAP free cash flow was \$169 million for the quarter, with non-GAAP free cash flow for the trailing four quarters totaling \$860 million, up 291% year-over-year. At the end of Q2 FYE24, Arm's cash and cash equivalents, and short term investments, totaled \$2,206 million, up 8% from \$2,049 million in the prior quarter and 60% year-over-year.

In closing

We are delighted with Arm's first quarter as a listed company, which has demonstrated the strength of our business model and the robustness of our diversified products and end markets. Thank you for taking the time to review our letter, and we look forward to speaking to you on our call later today.

Sincerely,

Rene Haas,
Chief Executive Officer



Jason Child,
Chief Financial Officer



Investor Contact

Ian Thornton
Investor.relations@arm.com

Media Contact

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Arm Holdings plc
Consolidated Income Statements
(in millions, except share and per share data)
(Unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Revenue:				
Revenue from external customers	\$ 644	\$ 469	\$ 1,179	\$ 993
Revenue from related parties	162	161	302	329
Total revenue	<u>806</u>	<u>630</u>	<u>1,481</u>	<u>1,322</u>
Cost of sales	(46)	(25)	(77)	(50)
Gross profit	<u>760</u>	<u>605</u>	<u>1,404</u>	<u>1,272</u>
Operating expenses:				
Research and development	(626)	(248)	(963)	(466)
Selling, general and administrative	(290)	(172)	(486)	(325)
Disposal, restructuring and other operating expenses, net	—	(2)	—	(4)
Total operating expense	<u>(916)</u>	<u>(422)</u>	<u>(1,449)</u>	<u>(795)</u>
Operating income (loss)	<u>(156)</u>	<u>183</u>	<u>(45)</u>	<u>477</u>
Income (loss) from equity investments, net	(5)	(60)	(12)	(74)
Interest income, net	28	6	52	8
Other non-operating income (loss), net	14	23	13	27
Income (loss) before income taxes	<u>(119)</u>	<u>152</u>	<u>8</u>	<u>438</u>
Income tax benefit (expense)	9	(38)	(13)	(99)
Net income (loss)	<u><u>(110)</u></u>	<u><u>114</u></u>	<u><u>(5)</u></u>	<u><u>339</u></u>
Net income (loss) per share attributable to ordinary shareholders				
Basic	\$ (0.11)	\$ 0.11	\$ 0.00	\$ 0.33
Diluted	\$ (0.11)	\$ 0.11	\$ 0.00	\$ 0.33
Weighted average ordinary shares outstanding				
Basic	1,025,312,845	1,025,234,000	1,025,273,638	1,025,234,000
Diluted	1,025,312,845	1,027,048,150	1,025,273,638	1,026,475,177

Arm Holdings plc
Consolidated Balance Sheets
(in millions, except par value and per share amounts)
(Unaudited)

	As of	
	September 30, 2023	March 31, 2023
Assets:		
Current assets:		
Cash and cash equivalents	\$ 1,406	\$ 1,554
Short-term investments	800	661
Accounts receivable, net (including receivables from related parties of \$270 and \$402 as of September 30, 2023 and March 31, 2023, respectively)	864	999
Contract assets	235	154
Prepaid expenses and other current assets	137	169
Total current assets	3,442	3,537
Non-current assets:		
Property and equipment, net	205	185
Operating lease right of use assets	205	206
Equity investments (including investments held at fair value of \$578 and \$592 as of September 30, 2023 and March 31, 2023, respectively)	725	723
Goodwill	1,615	1,620
Intangible assets, net	147	138
Deferred tax assets	139	139
Non-current portion of contract assets	121	116
Other non-current assets	211	202
Total non-current assets	3,368	3,329
Total assets	\$ 6,810	\$ 6,866
Liabilities:		
Current liabilities:		
Accrued compensation and benefits and share-based compensation	\$ 159	\$ 589
Tax liabilities	107	162
Contract liabilities (including contract liabilities from related parties of \$119 and \$135 as of September 30, 2023 and March 31, 2023, respectively)	288	293
Operating lease liabilities	24	26
Other current liabilities (including payables to related parties of \$17 as of September 30, 2023 and March 31, 2023)	217	293
Total current liabilities	795	1,363
Non-current liabilities:		
Non-current portion of accrued compensation and share-based compensation	19	152
Deferred tax liabilities	241	262
Non-current portion of contract liabilities	740	807
Non-current portion of operating lease liabilities	190	193
Other non-current liabilities	52	38
Total non-current liabilities	1,242	1,452
Total liabilities	2,037	2,815
Commitments and contingencies (Note 11)		

Arm Holdings plc
Consolidated Balance Sheets
(in millions, except par value and per share amounts)
(Unaudited)

	As of	
	September 30, 2023	March 31, 2023
Shareholders' equity:		
Ordinary shares, \$0.001 par value, 1,088,334,144 and 1,025,234,000 shares authorized, 1,025,234,000 issued and outstanding as of September 30, 2023 and March 31, 2023, respectively.	2	2
Additional paid-in capital	1,979	1,216
Accumulated other comprehensive income	352	376
Retained earnings	2,440	2,457
Total shareholders' equity	4,773	4,051
Total liabilities and shareholders' equity	\$ 6,810	\$ 6,866

Arm Holdings plc
Consolidated Statements of Cash Flows
(in millions)
(Unaudited)

	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Cash flows provided by (used for) operating activities:				
Net income (loss)	\$ (110)	\$ 114	\$ (5)	\$ 339
Adjustments to reconcile net income (loss) to net cash provided by (used for) operating activities:				
Depreciation and amortization	41	45	82	87
Deferred income taxes	(4)	(1)	(17)	(9)
Income (loss) from equity investments, net	5	60	12	74
Share-based compensation cost	513	34	653	47
Operating lease expense	9	8	17	17
Other non-cash operating activities, net	(3)	(13)	(3)	(2)
Changes in assets and liabilities:				
Accounts receivable, net (including receivables from related parties)	33	(144)	135	(209)
Contract assets	(55)	23	(87)	39
Prepaid expenses and other assets	12	8	13	13
Accrued compensation and benefits and share-based compensation	5	32	(442)	(509)
Contract liabilities (including contract liabilities from related parties)	(96)	(2)	(72)	12
Tax liabilities	(76)	(11)	(64)	39
Operating lease liabilities	(13)	(23)	(17)	(59)
Other current liabilities (including payables to related parties)	(34)	(54)	(92)	(34)
Net cash provided by (used for) operating activities	\$ 227	\$ 76	\$ 113	\$ (155)
Cash flows provided by (used for) investing activities				
Purchase of short-term investments	(125)	(440)	(385)	(665)
Proceeds from maturity of short-term investments	126	320	246	610
Purchases of equity investments	—	—	(11)	(3)
Purchases of intangible assets	(13)	(8)	(13)	(22)
Purchases of property and equipment	(34)	(26)	(60)	(38)
Net cash provided by (used for) investing activities	\$ (46)	\$ (154)	\$ (223)	\$ (118)
Cash flows provided by (used for) financing activities				
Payment of intangible asset obligations	(11)	(9)	(21)	(20)
Other financing activities, net	(1)	—	(6)	—
Payment of withholding tax on vested shares	(12)	—	(12)	—
Net cash provided by (used for) financing activities	\$ (24)	\$ (9)	\$ (39)	\$ (20)
Effect of foreign exchange rate changes on cash and cash equivalents	1	(11)	1	(21)
Net decrease in cash and cash equivalents	158	(98)	(148)	(314)
Cash and cash equivalents at the beginning of the period	1,248	788	1,554	1,004
Cash and cash equivalents at the end of the period	\$ 1,406	\$ 690	\$ 1,406	\$ 690
Non-cash operating, investing and financing activities:				
Non-cash additions in property and equipment	5	2	5	9
Non-cash additions in intangible assets	—	—	38	—
Non-cash additions to equity investments from conversion of certain receivables	4	—	4	—
Non-cash additions in operating lease right of use assets	6	2	13	2
Non-cash additions of operating lease liabilities	6	2	13	2
Non-cash distributions to shareholders	12	—	12	—
Non-cash withholding tax on vested shares	11	—	11	—
Non-cash reclassification of share-based compensation costs	343	—	343	—

Key Financial and Operating Metrics

We use the following key performance indicators and non-GAAP financial measures to analyze our business performance and financial forecasts and to develop strategic plans, which we believe provide useful information to the market to aid in understanding and evaluating our results of operations in the same manner as our management team. Certain judgments and estimates are inherent in our processes to calculate these metrics. These key performance indicators and non-GAAP financial measures are presented for supplemental informational purposes only, should not be considered a substitute for financial information presented in accordance with GAAP, and may differ from similarly titled metrics or measures presented by other companies.

The following table sets forth a summary of the key financial and operating metrics:

(in millions, except for Number of Arm-based Chips, Number of extant Arm Total Access and Arm Flexible Access licenses, and Total number of employees and engineers)	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Total revenue	806	630	1,481	1,322
License and other revenue	388	188	663	446
R royalty revenue	418	442	818	876
Operating income	(156)	183	(45)	477
Non-GAAP operating income (1)	381	198	653	495
Net income from continuing operations	(110)	114	(5)	339
Non-GAAP net income (1)	380	178	626	414
Net cash provided by operating activities	227	76	113	(155)
Non-GAAP free cash flow (1)	169	33	19	(235)

Operating metrics:

Number of Arm-based chips reported as shipped (billions)	7.1	7.5	13.9	14.8
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Operating metrics:	As of	
	September 30, 2023	September 30, 2022
Cumulative number of Arm-based chips reported as shipped (billions)	272.5	242.0
Number of extant Arm Total Access licenses (2)	22	13
Number of extant Arm Flexible Access licenses (2)(3)	212	194
Annualized contract value	\$ 1,108	\$ 1,080
Remaining performance obligation	\$ 2,414	\$ 1,751
Total number of employees (at end of period)	6,629	5,679
Total number of engineers	5,318	4,500
Total number of non-engineers	1,311	1,179

(1) Non-GAAP operating income, Non-GAAP net income from continuing operations and Non-GAAP free cash flow are non-GAAP financial measures. For more information regarding our use of these measures and a reconciliation of these measures to the most directly comparable GAAP financial measures, see “—GAAP to Non-GAAP Reconciliation” below.

(2) As of the last day of the applicable period.

(3) For the quarter ended June 30, 2023 (Q1 FYE24), the number of Flexible Access agreements has been corrected to 211 from 214 (as previously reported in our IPO Prospectus) to account for certain customer license terminations and a consolidation of customer licenses due to an acquisition.

Number of Arm-based chips reported as shipped - for the period and cumulative

Each quarter, most of our customers, and those contracted through Arm China, furnish us (directly or via Arm China) with royalty reports setting forth the actual number of Arm-powered chips they shipped in the immediately preceding quarter. Royalty reports received in the 12-month period from April 1 to March 31 of each year relate to chip shipments made in the period from January 1 to December 31 of each year. We also perform various procedures to assess customer data related to royalties for reasonableness, and our license agreements generally include rights for us to audit the books and records of our customers to verify certain types of customer data.

We consider the number of chips reported as shipped by our customers as a key performance indicator because it represents the acceptance of our products by companies who use chips in their products (e.g., our customers’ customers). The number

of chips shipped also provides insight into chip pricing and volumes in different end markets, which helps inform our pricing models and competitive positioning.

The cumulative number of Arm-based chips reported as shipped are from inception to date. We consider the cumulative number of Arm-based chips reported as shipped by our customers as a key performance indicator because it represents the scale of expansion of Arm-based products.

Number of extant Arm Total Access and Arm Flexible Access licenses

Each quarter, we track the number of extant Arm Total Access and Arm Flexible Access licenses with our customers, and those contracted through Arm China. We believe that, over time, many of our customers will transition to either an Arm Total Access or Arm Flexible Access license to access our products. This transition enables us and our customers to focus less on contract negotiations and more on how our products can be deployed in our customers' future chips.

We consider the number of extant Arm Total Access and Arm Flexible Access licenses as key performance indicators as they represent the increasing collaboration between us and our customers, which could be a leading indicator to more chips being designed with our products and, accordingly, more recurring royalty revenue in the future, improving our long-term market share.

Annualized contract value

Each quarter, we track the annualized contract value ("ACV") relating to licensing agreements signed with our customers and those contracted through Arm China per the aggregate license fee as shared under the IPLA. We define ACV as the total annualized committed fees, excluding any potential future royalty revenue, for all signed agreements deemed to be active through the last day of each applicable reporting period. Arm Total Access agreements and ALAs are deemed to be active for, and annualized over, the number of years in the contract. Any other license agreements, including single use and limited use licenses issued under an Arm Flexible Access agreement or TLA, are deemed to be active for, and annualized over, three years based on the historical licensing patterns of our customers. The aggregate license fee shared by Arm China is also deemed to be active for, and annualized over, three years.

ACV is an operational metric based on committed fees, excluding royalties, not recognized revenue, and therefore is not reconcilable to, nor a substitute for, revenue reported under GAAP. However, we consider ACV to be a key operational metric that we use to track existing licensing commitments with our customers. Bookings of new licenses and recognized revenue may fluctuate materially from quarter to quarter due to customer buying patterns, timing of subscription renewals and as a function of contract duration. As a result, we believe ACV provides an additional understanding of our business performance and long-term trends.

Remaining performance obligations

Remaining performance obligations ("RPO") represent the transaction price allocated to performance obligations that are unsatisfied, or partially unsatisfied, which includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods.

Arm has elected to exclude potential future royalty receipts from the disclosure of remaining performance obligations. Revenue recognition occurs upon delivery or beginning of license term, whichever is later.

Non-GAAP financial measures

In addition to our results determined in accordance with GAAP, we utilize and present financial measures that are not calculated and presented in accordance with GAAP. Our non-GAAP financial measures include non-GAAP cost of sales, non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP research and development, non-GAAP selling, general and administrative, non-GAAP operating expense, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP income (loss) from equity investments, net, non-GAAP interest income, net, non-GAAP other non-operating income (loss), net, non-GAAP income before income taxes, net, non-GAAP net income, non-GAAP basic and diluted net income per share attributable to ordinary shareholders, and free cash flow. We believe these non-GAAP financial measures provide useful information to investors and others in understanding and evaluating our results of operations, as well as provide a useful measure for period-to-period comparisons of our business performance. Moreover, we have included these non-GAAP financial measures because they are key measurements used by our management internally to make operating decisions, including those related to analyzing operating expenses, evaluating performance, and performing strategic

planning and annual budgeting. We believe that the presentation of our non-GAAP financial measures, when viewed holistically, is helpful to investors in assessing the consistency and comparability of our performance in relation to prior periods and facilitates comparisons of our financial performance relative to our competitors, particularly with respect to competitors that present similar non-GAAP financial measures in addition to their GAAP results.

Non-GAAP financial measures are presented for supplemental information purposes only, should not be considered a substitute for financial information presented in accordance with GAAP, and may not align with similar financial measures presented by our competitors, which may limit the ability of investors to assess our performance relative to certain peer companies.

Non-GAAP financial measures presented herein exclude acquisition-related intangible asset amortization, share-based compensation cost associated with equity awards where our intent is to issue equity upon vesting (in lieu of cash settlement), costs associated with disposal activities, impairment of long-lived assets, restructuring and related costs, public company readiness costs, other operating income (expenses), net, (income) loss from equity method investments, and income tax effect on non-GAAP adjustments. We exclude these items from our non-GAAP financial measures because they are non-cash in nature, or because the amount and timing of these items is unpredictable and not driven by core results of operations, which renders comparisons with prior periods and competitors less meaningful.

Investors should consider non-GAAP financial measures alongside other financial performance measures, including operating income, net income and our other GAAP results. For more information regarding our use of these measures and a reconciliation to the most directly comparable GAAP financial measure, see “—GAAP to Non-GAAP Reconciliation.”

The following is a reconciliation of GAAP to Non-GAAP results:

	Three Months Ended September 30, 2023								Non-GAAP Results
	GAAP Results	Acquisition-related intangible asset amortization	Share-based compensation costs (equity settled) (1)(2)(3)	Public company readiness costs	Costs associated with disposal activities	Restructuring and related costs	Income (loss) from equity investments, net	Income tax effects on non-GAAP adjustments	
(in millions, except share and per share amounts)									
Total revenue	\$ 806	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 806
Cost of sales	(46)	1	19	—	—	—	—	—	(26)
Gross profit	760	1	19	—	—	—	—	—	780
Gross profit margin	94.3 %								96.8 %
Operating expenses:									
Research and development	(626)	—	343	—	—	—	—	—	(283)
Selling, general and administrative	(290)	—	147	27	—	—	—	—	(116)
Total operating expense	(916)	—	490	27	—	—	—	—	(399)
Operating income (loss)	(156)	1	509	27	—	—	—	—	381
Operating profit margin	(19.4)%								47.3 %
Income (loss) from equity investments, net	(5)	—	—	—	—	—	5	—	—
Interest income, net	28	—	—	—	—	—	—	—	28
Other non-operating income (loss), net	14	—	—	—	—	—	—	—	14
Income (loss) before income taxes	(119)	1	509	27	—	—	5	—	423
Income tax benefit (expense)	9	—	—	—	—	—	—	(52)	(43)
Net income (loss)	\$ (110)	\$ 1	\$ 509	\$ 27	\$ —	\$ —	\$ 5	\$ (52)	\$ 380
Net income (loss) per share attributable to ordinary shareholders									
Basic	\$ (0.11)							\$ 0.37	
Diluted	\$ (0.11)							\$ 0.36	
Weighted average ordinary shares outstanding									
Basic	1,025,312,845							1,025,312,845	
Diluted	1,025,312,845							1,042,978,494	

(1) Total share-based compensation cost, including both cash and equity settled awards, was \$518 million for the three months ended September 30, 2023. For non-GAAP purposes, we adjust for those awards that are currently liability-classified but will be equity settled after the initial public offering. Liability-classified awards are remeasured at the end of each reporting period through the date of settlement to ensure that the expense recognized for each award is equivalent to the amount to be paid in cash or equity settled after the initial public offering.

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 GAAP to Non-GAAP Reconciliation (continued)
 (Unaudited)

	Three Months Ended September 30, 2022								Non-GAAP Results
	GAAP Results	Acquisition-related intangible asset amortization	Share-based compensation costs (equity settled) (1)(2)(3)	Public company readiness costs	Costs associated with disposal activities	Restructuring and related costs	Income (loss) from equity investments, net	Income tax effects on non-GAAP adjustments	
(in millions, except share and per share amounts)									
Total revenue	\$ 630	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 630
Cost of sales	(25)	1	—	—	—	—	—	—	(24)
Gross profit	605	1	—	—	—	—	—	—	606
Gross profit margin	96.0 %								96.2 %
Operating expenses:									
Research and development	(248)	—	(2)	—	—	—	—	—	(250)
Selling, general and administrative	(172)	—	1	13	—	—	—	—	(158)
Impairment of long-lived assets	—	—	—	—	—	—	—	—	—
Disposal, restructuring and other operating expenses, net	(2)	—	—	—	2	—	—	—	—
Total operating expense	(422)	—	(1)	13	2	—	—	—	(408)
Operating income (loss)	183	1	(1)	13	2	—	—	—	198
Operating profit margin	29.0 %								31.4 %
Income (loss) from equity investments, net	(60)	—	—	—	—	—	60	—	—
Interest income, net	6	—	—	—	—	—	—	—	6
Other non-operating income (loss), net	23	—	—	—	—	—	—	—	23
Income (loss) before income taxes	152	1	(1)	13	2	—	60	—	227
Income tax (expense) benefit	(38)	—	—	—	—	—	—	(11)	(49)
Net income (loss)	\$ 114	\$ 1	\$ (1)	\$ 13	\$ 2	\$ —	\$ 60	\$ (11)	\$ 178
Net income (loss) per share attributable to ordinary shareholders									
Basic	\$ 0.11							\$ 0.17	
Diluted	\$ 0.11							\$ 0.17	
Weighted average ordinary shares outstanding									
Basic	1,025,234,000							1,025,234,000	
Diluted	1,027,048,150							1,027,048,150	

(1) Total share-based compensation cost, including both cash and equity settled awards, was \$46 million for the three months ended September 30, 2022. In the three months ended September 30, 2022, the share-based compensation income of \$1 million pertains to a decrease in fair value of certain liability-classified awards that will be settled in equity at the time of vesting. For non-GAAP purposes, we adjust for those awards that are currently liability-classified but will be equity settled after the initial public offering. Liability-classified awards are remeasured at the end of each reporting period through the date of settlement to ensure that the expense recognized for each award is equivalent to the amount to be paid in cash or equity settled after the initial public offering.

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 GAAP to Non-GAAP Reconciliation (continued)
 (Unaudited)

	Six Months Ended September 30, 2023								Non-GAAP Results
	GAAP Results	Acquisition-related intangible asset amortization	Share-based compensation costs (equity settled) (1)(2)(3)	Public company readiness costs	Costs associated with disposal activities	Restructuring and related costs	Income (loss) from equity investments, net	Income tax effects on non-GAAP adjustments	
(in millions, except share and per share amounts)									
Total revenue	\$ 1,481	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 1,481
Cost of sales	(77)	2	25	—	—	—	—	—	(50)
Gross profit	1,404	2	25	—	—	—	—	—	1,431
Gross profit margin	94.8 %								96.6 %
Operating expenses:									
Research and development	(963)	—	439	—	—	—	—	—	(524)
Selling, general and administrative	(486)	—	191	41	—	—	—	—	(254)
Impairment of long-lived assets	—	—	—	—	—	—	—	—	—
Disposal, restructuring and other operating expenses, net	—	—	—	—	—	—	—	—	—
Total operating expense	(1,449)	—	630	41	—	—	—	—	(778)
Operating income (loss)	(45)	2	655	41	—	—	—	—	653
Operating profit margin	(3.0)%								44.1 %
Income (loss) from equity investments, net	(12)	—	—	—	—	—	12	—	—
Interest income, net	52	—	—	—	—	—	—	—	52
Other non-operating income (loss), net	13	—	—	—	—	—	—	—	13
Income (loss) before income taxes	8	2	655	41	—	—	12	—	718
Income tax benefit (expense)	(13)	—	—	—	—	—	—	(79)	(92)
Net income (loss)	\$ (5)	\$ 2	\$ 655	\$ 41	\$ —	\$ —	\$ 12	\$ (79)	\$ 626
Net income (loss) per share attributable to ordinary shareholders									
Basic	\$ —							\$ 0.61	
Diluted	\$ —							\$ 0.60	
Weighted average ordinary shares outstanding									
Basic	1,025,273,638							1,025,273,638	
Diluted	1,025,273,638							1,035,798,696	

(1) Total share-based compensation cost, including both cash and equity settled awards, was \$676 million for the six months ended September 30, 2023. For non-GAAP purposes, we adjust for those awards that are currently liability-classified but will be equity settled after the initial public offering. Liability-classified awards are remeasured at the end of each reporting period through the date of settlement to ensure that the expense recognized for each award is equivalent to the amount to be paid in cash or equity settled after the initial public offering.

	Six Months Ended September 30, 2022								
(in millions, except share and per share amounts)	GAAP Results	Acquisition-related intangible asset amortization	Share-based compensation costs (equity settled) (1)(2)(3)	Public company readiness costs	Costs associated with disposal activities	Restructuring and related costs	Income (loss) from equity investments, net	Income tax effects on non-GAAP adjustments	Non-GAAP Results
Total revenue	\$ 1,322	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 1,322
Cost of sales	(50)	3	—	—	—	—	—	—	(47)
Gross profit	1,272	3	—	—	—	—	—	—	1,275
Gross profit margin	96.2 %								96.4 %
Operating expenses:									
Research and development	(466)	—	(1)	—	—	—	—	—	(467)
Selling, general and administrative	(325)	—	(7)	21	—	—	—	—	(311)
Impairment of long-lived assets	—	—	—	—	—	—	—	—	—
Disposal, restructuring and other operating expenses, net	(4)	—	—	—	1	1	—	—	(2)
Total operating expense	(795)	—	(8)	21	1	1	—	—	(780)
Operating income (loss)	477	3	(8)	21	1	1	—	—	495
Operating profit margin	36.1 %								37.4 %
Income (loss) from equity investments, net	(74)	—	—	—	—	—	74	—	—
Interest income, net	8	—	—	—	—	—	—	—	8
Other non-operating income (loss), net	27	—	—	—	—	—	—	—	27
Income (loss) before income taxes	438	3	(8)	21	1	1	74	—	530
Income tax (expense) benefit	(99)	—	—	—	—	—	—	(17)	(116)
Net income (loss)	\$ 339	\$ 3	\$ (8)	\$ 21	\$ 1	\$ 1	\$ 74	\$ (17)	\$ 414
Net income (loss) per share attributable to ordinary shareholders									
Basic	\$ 0.33							\$ 0.40	
Diluted	\$ 0.33							\$ 0.40	
Weighted average ordinary shares outstanding									
Basic	1,025,234,000								1,025,234,000
Diluted	1,026,475,177								1,026,475,177

(1) Total share-based compensation cost, including both cash and equity settled awards, was \$59 million for the six months ended September 30, 2022. In the six months ended September 30, 2022, the share-based compensation income of \$8 million pertains to a decrease in fair value of certain liability-classified awards that will be settled in equity at the time of vesting. For non-GAAP purposes, we adjust for those awards that are currently liability-classified but will be equity settled after the initial public offering. Liability-classified awards are remeasured at the end of each reporting period through the date of settlement to ensure that the expense recognized for each award is equivalent to the amount to be paid in cash or equity settled after the initial public offering.

(2) A summary of share-based compensation cost recognized on the Condensed Consolidated Income Statements is as follows:

(in millions)	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Cost of sales	\$ 20	\$ 2	\$ 26	\$ 3
Selling, general and administrative	149	12	198	18
Research and development	349	32	452	38
Total	<u><u>\$ 518</u></u>	<u><u>\$ 46</u></u>	<u><u>\$ 676</u></u>	<u><u>\$ 59</u></u>

(3) A summary of share-based compensation liability-classified cost recognized on the Condensed Consolidated Income Statements is as follows:

(in millions)	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Cost of sales	\$ 1	\$ 2	\$ 1	\$ 3
Selling, general and administrative	2	11	7	25
Research and development	6	34	13	39
Total	<u><u>\$ 9</u></u>	<u><u>\$ 47</u></u>	<u><u>\$ 21</u></u>	<u><u>\$ 67</u></u>

The following is a reconciliation of Non-GAAP free cash flow to Net cash provided by operating activities, the most directly comparable GAAP cash flow measure:

(in millions)	Three Months Ended September 30,		Six Months Ended September 30,	
	2023	2022	2023	2022
Net cash provided by operating activities	\$ 227	\$ 76	\$ 113	\$ (155)
<i>Adjusted for:</i>				
Purchases of property and equipment	(34)	(26)	(60)	(38)
Purchases of intangible assets	(13)	(8)	(13)	(22)
Payment of intangible asset obligations	(11)	(9)	(21)	(20)
Non-GAAP free cash flow	<u><u>\$ 169</u></u>	<u><u>\$ 33</u></u>	<u><u>\$ 19</u></u>	<u><u>\$ (235)</u></u>

Forward-Looking Statements

This shareholder letter contains forward-looking statements that reflect our plans, beliefs, expectations and current views with respect to, among other things, future events and financial performance. Our actual results could differ materially from the forward-looking statements included herein. Statements regarding our future and projections relating to revenue, cost of sales expenses, costs, income (loss), and potential growth opportunities are typical of such statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in “*Risk Factors*” in our IPO Prospectus.

The following contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, relating to our operations, results of operations and other matters that are based on our current expectations, estimates, assumptions and projections. Forward-looking statements are based on our management’s beliefs and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by the words “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “is/are likely to,” “intend,” “plan,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “target,” “continue” and “ongoing,” or the negative of these terms or other comparable terminology intended to identify statements about the future. The forward-looking statements and opinions are based upon current expectations and, while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. We caution that you should not place undue reliance on any of our forward-looking statements. We undertake no obligation to update forward-looking statements to reflect developments or information obtained after the date hereof and disclaim any obligation to do so except as required by applicable laws.

EXHIBIT 6

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

Page 1

1 UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF DELAWARE

3 ---oo---

4
5 ARM LTD., a UK Corporation,)
6)
7 Plaintiff,)
8)
9 vs.) C.A. No. 22-1146 (MN)
10)
11 QUALCOMM INC., a Delaware)
12 corporation; QUALCOMM)
13 TECHNOLOGIES, INC., a)
14 Delaware Corporation, and)
15 NUVIA, INC., a Delaware)
16 Corporation,)
17)
18 Defendants.)
19)
20)

21 HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

22 VIDEOTAPED DEPOSITION OF RENE HAAS

23 TUESDAY, DECEMBER 12, 2023

24 STENOGRAPHICALLY REPORTED BY:

25 ANDREA M. IGNACIO, CSR, RPR, CRR, CCRR, CLR ~
CSR LICENSE NO. 9830
JOB NO. 6326906

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

	Page 2		Page 4
1	UNITED STATES DISTRICT COURT	1	I N D E X
2	FOR THE DISTRICT OF DELAWARE	2	
3	---oOo---	3	WITNESS: Rene Haas
4		4	
5	ARM LTD., a UK Corporation,)	5	EXAMINATION PAGE
6	Plaintiff,)	6	BY MS. DUNN 9, 351
7) vs.) C.A. No. 22-1146 (MN)	7	BY MS. YING 319
8)	8	BY MR. JACOBS 348, 354
9	QUALCOMM INC., a Delaware)	9	
10	corporation; QUALCOMM)	10	E X H I B I T S
11	TECHNOLOGIES, INC., a)	11	EXHIBIT PAGE
12	Delaware Corporation, and)	12	Exhibit 142 RH Masa 2.4 20.22.ptx Bates 14
13	NUVIA, INC., a Delaware)	13	ARM_01230402 - '81
14	Corporation,)	14	Exhibit 143 2022-04-28 Rene briefing Bates 47
15)	15	ARM_00098756
16	Defendants.)	16	Exhibit 144 Chat Filters, Bates 59
17	_____)	17	ARM_01241616 - 20
18		18	Exhibit 145 Chat Filters, Bates 73
19	Videotaped deposition of RENE HAAS, taken on	19	ARM_00082083 - '89
20	behalf of the Defendant, pursuant to Notice, on	20	Exhibit 146 Chat Filters, Bates 108
21	Tuesday, December 12, 2023, at Morrison & Foerster,	21	ARM_00082120 - '27
22	LLP, 755 Page Mill Road, Palo Alto, California	22	Exhibit 147 Chat Filters, Bates 124
23	beginning at 9:25 a.m., and ending at 6:02 p.m.,	23	ARM_01239056 - '68
24	before me, ANDREA M. IGNACIO, CSR, RPR, CCRR,	24	Exhibit 148 2-1-22 Letter, Bates ARM_00037427 136
25	CRR, CLR ~ License No. 9830.	25	//
	Page 3		Page 5
1	A P P E A R A N C E S:	1	EXHIBITS
2		2	EXHIBIT PAGE
3	FOR THE PLAINTIFF:	3	Exhibit 149 Chat Filters, Bates 153
4	MORRISON & FOERSTER LLP	4	ARM_00087926 - '29
5	By: MICHAEL JACOBS, Esq.	5	Exhibit 150 Chat Filters, Bates 175
6	ERIK J. OLSON, Esq.	6	ARM_00087844 - '50
7	755 Page Mill Road	7	Exhibit 151 8-31-22 E-mail Bates 184
8	Palo Alto, California 94304	8	ARM_00094320 - '63
9	650.813.5825	9	Exhibit 152 8-31-22 E-mail Bates 200
10	mjacobs@mofo.com	10	ARM_00110511 - '12
11		11	Exhibit 153 Chat Filters, Bates 225
12	FOR THE DEFENDANT:	12	ARM_00087844 - '50
13	PAUL WEISS	13	Exhibit 154 3-5-23 E-mail Bates 231
14	By: KAREN L. DUNN, Esq.	14	ARM_01215878 - '79
15	MADALYN VAUGHN, Esq. New York	15	Exhibit 155 Anticipated Acquisition by Nvidia 273
16	ERIN MORGAN, Esq. New York	16	Corporation of Arm Limited Initial
17	2001 K Street, NW	17	Submission 12-20-21 Bates
18	Washington, D.C. 20006-1047	18	ARM_00088656 - '84
19	kdunn@paulweiss.com	19	Exhibit 156 Chat Filters, Bates ARM_01239046 288
20		20	- '49
21		21	Exhibit 157 Samsung - Arm Executive Meeting 310
22	ALSO PRESENT:	22	10-4-22, Bates ARM_01427450 - '92
23	Doug Stock, Videographer	23	Exhibit 158 How a Lopsided Apple Deal Got 326
24	Robert Calico, Arm Ltd.	24	Under Arm's Skin
25	---oOo---	25	//

2 (Pages 2 - 5)

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

PREVIOUSLY MARKED EXHIBITS			Page 6
EXHIBIT	PAGE		
3 Exhibit 108	2-16-21 Letter, Bates	91	
4	ARM_01284106		
5	---oOo---		
6			
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25			
DEPOSITION PROCEEDINGS			Page 7
1	DECEMBER 12, 2023	9:25 A.M.	
2	---oOo---		
3			
4			
5	THE VIDEOGRAPHER: Good morning. We are on	0	
6	the record at 9:25 a.m. on December 12, 2023.		
7	Please note that the microphones are		
8	sensitive and may pick up whispering and private		
9	conversations. Please mute your phones at this time.		
10	Audio and video recording will continue to take place		
11	unless all parties agree to go off the record.		
12	This is Media Unit 1 of the video-recorded		
13	deposition of Rene Haas. Taken by counsel for the		
14	Defendant, in the matter of Arm Limited versus		
15	Qualcomm Inc., et al. This case is filed in the		
16	United States District Court for the District of		
17	Delaware. Case No. 22-1146(MN).		
18	The location of today's deposition is		
19	755 Page Mill Road, Palo Alto, California.		
20	My name is Douglas Stock, representing		
21	Veritext. I am the videographer.		
22	And the court reporter today is Andrea		
23	Ignacio, also from Veritext.		
24	I am not authorized to administer an oath. I		
25	am not related to any party in this action, nor am I		
RENE HAAS,			Page 9
1	having been sworn as a witness		
2	by the Certified Shorthand Reporter,		
3	testified as follows:		
4			
5			
6	MS. DUNN: Thank you.		
7			
8	EXAMINATION		
9	BY MS. DUNN:		
10	Q Mr. Haas, when did you start working at Arm?		
11	A October of 2013.		
12	Q Great.		
13	And what was your role when you started at		
14	Arm?		
15	A I was vice president for strategic alliances.		
16	Q Okay. Are you trained as an engineer?		
17	A My degree is in engineering.		
18	Q Okay. Do you consider yourself an engineer		
19	today?		
20	A I don't do engineering work today.		
21	Q Okay. When was the last time you did any?		
22	A I was a field application engineer at NEC		
23	Electronics in the early 1990s. That was probably the		
24	last time.		
25	Q Okay. And then at some point, you were named		

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

<p style="text-align: right;">Page 158</p> <p>1 already. 2 Mr. Williamson says: 3 "I prefer to test the pitch with Xiaomi, who 4 have a real need and intention." 5 Do you see that? 6 A Uh-huh. 7 Q Okay. What is Mr. Williamson talking about 8 pitching? 9 A Yeah, I'm not sure as I'm reading through 10 this. 11 Q And does it refresh your recollection that 12 you respond to Mr. Williamson and say: 13 "They" -- meaning Xiaomi -- "and Samsung 14 should be first, but we need the soul of the product 15 to be told." 16 Do you see that? 17 A Uh-huh, yeah. 18 Q Okay. So you and Mr. Williamson are speaking 19 about pitching a product to Samsung and to Xiaomi and 20 to others. What product is that? 21 A Just looking up to the top of the thread, I 22 think it's the TC24, which is the Total Compute 23 Platform. 24 Q Okay. And what is the Total Compute 25 Platform?</p>	<p style="text-align: right;">Page 160</p> <p>1 squash Nuvia? 2 A You know, it's Paul's -- it's Paul's line, so 3 yeah, it's his -- his view. I'm not exactly sure 4 where he was coming from on that. 5 QOkay. So even though you don't say [REDACTED] [REDACTED] [REDACTED] [REDACTED] your testimony today is that you 10 don't -- you don't know what he's talking about? 11 A That's right. 12 Q And then you say: 13 "MediaTek won't take this unless forced. OEM 14 is key, not MediaTek." 15 Do you see that? 16 A Yes. 17 Q And you also say: 18 "AGREED. Longer discussion, but we can't 19 give people a back door. Our partners are smart." 20 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p>
<p style="text-align: right;">Page 159</p> <p>1 A It is a combination of CPUs and GPUs and 2 interconnect to build a mobile phone SoC. 3 Q Okay. And that's what you're discussing 4 pitching to these various companies? 5 A Yes. 6 Q And you say: 7 "MediaTek is practically last." 8 Do you see that? 9 A Yes. 10 Q Okay. And why do you say that MediaTek 11 should be last -- practically last? 12 A Because they don't build phones. 13 Q Okay. And are you -- were you aware at this 14 time whether Qualcomm was trying to sell to MediaTek? 15 A Qualcomm does not sell to MediaTek. 16 Q Okay. All right. 17 A To the best of my -- to the best of my 18 knowledge. 19 Q And then Mr. Williamson responds and agrees 20 and says: 21 [REDACTED] [REDACTED] 23 Do you say that -- see that? 24 A Yes. 25 Q Okay. And why was MediaTek Arm's path to</p>	<p style="text-align: right;">Page 161</p> <p>1 A Yeah, they're separate issues. [REDACTED] [REDACTED] [REDACTED] [REDACTED] 6 Q Okay. 7 A So it's kind of a -- it's kind of orthogonal 8 to -- to Nuvia at this point. 9 Q And Mr. Williamson saying to you that 10 [REDACTED] [REDACTED] [REDACTED] 13 A No. 14 Q No. 15 Did he say things like this all the time? 16 A [REDACTED] 17 Q Yeah. 18 A [REDACTED] [REDACTED] 21 Q Yeah, so this is just you guys being candid? 22 A Uh-huh. 23 Q Okay. All right. 24 So we've seen this -- this phrase before, 25 [REDACTED] in connection</p>

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

<p style="text-align: right;">Page 162</p> <p>1 with what was called Aurora. 2 Do you recall that? 3 A Yes. 4 Q Okay. And when did Arm start pitching Aurora 5 to customers? 6 A I don't know if we ever did. 7 Q Okay. 8 A I don't think we did. 9 Q Okay. Okay. 10 And then if you could just look at the end 11 where Mr. Williamson is saying: 12 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 19 Do you see that? 20 A Yes. 21 Q Do you know what you're -- what you are 22 talking about when you say [REDACTED] [REDACTED] [REDACTED] [REDACTED]</p>	<p style="text-align: right;">Page 164</p> <p>1 [REDACTED] [REDACTED] [REDACTED] 4 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 9 [REDACTED] [REDACTED] [REDACTED] [REDACTED] 14 MS. DUNN: Okay. 15 Q Apart from being in uncharted waters and not 16 being able to find a settlement, what other harm can 17 you articulate -- 18 A We were -- we were -- 19 Q -- as of the time when you decided to bring a 20 lawsuit? 21 A -- we were literally, as I said, at a point 22 where it was about potential harm. It wasn't -- it 23 wasn't really about harm at the time. It was about if 24 we -- if we turn the other way and we allow our IP to 25 be used in an unlicensed way, you kind of don't really</p>
<p style="text-align: right;">Page 163</p> <p>1 [REDACTED] [REDACTED] 3 Q Okay. And who would your competitors be in 4 doing that? 5 A Nobody. 6 Q You would have no competition? 7 A Correct. 8 Q Okay. Okay. 9 So Arm sued Qualcomm on August 31 of 2022. 10 And at that time -- you recall that? 11 You can put that to the side. 12 You recall that Arm sued Qualcomm on 13 August 31, 2022; correct? 14 A Uh-huh. 15 Q Okay. At that time, what evidence was there 16 that Arm had been harmed by Qualcomm's conduct? 17 MR. JACOBS: Objection; form. 18 THE WITNESS: At the time that we filed the 19 lawsuit, what evidence was present that we had been 20 harmed? 21 MS. DUNN: Yeah. 22 THE WITNESS: [REDACTED] [REDACTED] [REDACTED]</p>	<p style="text-align: right;">Page 165</p> <p>1 have a business. 2 Q Okay. And so at that time, other than the 3 potential harm you just talked about, was there any 4 harm that you could articulate? 5 A Potential harm -- no. At that time, we had 6 never had a customer ignore our contracts blatantly. 7 So let's just say Qualcomm lets other 8 companies know that. You know what? [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]. 16 Q Okay. And you said earlier that you were not 17 an expert in the Nuvia contract, I believe? 18 A That's right. 19 Q Were you an expert in Qualcomm's ALA? 20 A No. 21 Q And are you an expert, as you sit here today, 22 in Qualcomm's ALA? 23 A I am not. 24 Q Okay. And sitting here today, what -- what 25 concrete harm has Arm suffered?</p>

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

Page 170	Page 172
1 A The board approved it, so by definition.	1 Do you recall that?
2 Q Okay. And the lawsuit got press coverage	2 A Yes.
3 when it was filed; right?	3 Q All right.
4 A Yes.	4 And what was the purpose of your sending the
5 Q Okay. And people in the industry were aware	5 letter?
6 of it; right?	6 A [REDACTED]
7 A I assume.	[REDACTED]
8 Q Right.	[REDACTED]
9 Well, I mean, you mentioned that customers	[REDACTED]
10 have come to you to ask questions, so --	10 Q [REDACTED]
11 A Well, you're talking about the press re- -- I	[REDACTED]
12 don't know who read the press release when it came	[REDACTED]
13 out. You're talking about when the press was	[REDACTED]
14 released. I can't speak to what happened that day.	[REDACTED]
15 Q Were people in the industry aware of the	[REDACTED]
16 lawsuit?	[REDACTED]
17 A Were -- were they aware when?	17 Q Okay.
18 Q After it was filed --	18 A That was the question you asked me.
19 A Uh-huh.	19 Q Okay. But you agree that you sent out a
20 Q -- to -- to your knowledge, did people in the	20 number of letters to alert industry participants to
21 industry become aware of the lawsuit?	21 the lawsuit; correct?
22 A Sure.	22 A I wouldn't say "industry participants." I
23 Q Right.	23 would call them customers of ours.
24 It wasn't a secret. People knew about it;	24 Q Okay. So we can agree that on the day that
25 right?	25 Arm filed suit, you personally sent a letter to
Page 171	Page 173
1 MR. JACOBS: Objection; form; asked and	1 various customers of yours to alert them to the
2 answered.	2 lawsuit; correct?
3 THE WITNESS: When -- but when you say	3 A Correct.
4 "people knew about it," over what time period?	4 Q [REDACTED]
5 I'm not sure. That's kind of a vague	[REDACTED]
6 question.	[REDACTED]
7 MS. DUNN: Q. Is it your understanding that	[REDACTED]
8 the fact of your lawsuit was well-known in the	[REDACTED]
9 industry.	[REDACTED]
10 A I don't know how to define "well-known."	[REDACTED]
11 Q Okay. Is it your understanding that other	[REDACTED]
12 industry actors knew about your lawsuit?	[REDACTED]
13 A Some knew.	[REDACTED]
14 Q Okay. Okay.	[REDACTED]
15 Give me one second.	[REDACTED]
16 Right. Okay. All right.	16 MS. DUNN: Okay. Okay.
17 Now, this --	17 Q [REDACTED]
18 MS. MORGAN: Oh, actually...	[REDACTED]
19 (Sotto voce discussion between counsel.)	[REDACTED]
20 MS. DUNN: Okay. All right.	[REDACTED]
21 Q You testified earlier that -- actually,	[REDACTED]
22 strike that.	[REDACTED]
23 The same day Arm filed the lawsuit, August 31	[REDACTED]
24 of 2022, you personally sent a letter to various	[REDACTED]
25 industry participants.	[REDACTED]

HIGHLY CONFIDENTIAL ATTORNEYS' EYES ONLY

Page 354	Page 356
1 FURTHER EXAMINATION	1 CERTIFICATE OF REPORTER
2 BY MR. JACOBS:	2
3 Q Let me just be clear: When you spoke to	3 I, ANDREA M. IGNACIO, hereby certify that the
4 Mr. Son, was the thrust of the conversation at a --	4 witness in the foregoing deposition was by me first
5 when you say "at a high level," was the thrust of the	5 duly sworn to tell the truth, the whole truth, and
6 conversation, "Were you and I there together	6 nothing but the truth in the within-entitled cause;
7 throughout, or did you have a separate discussion?"	7 That said deposition was taken in shorthand
8 Was that the thrust of the -- the	8 by me, a disinterested person, at the time and place
9 conversation with him?	9 therein stated, and that the testimony of the said
10 A Correct.	10 witness was thereafter reduced to typewriting, by
11 Q [REDACTED]	11 computer, under my direction and supervision;
[REDACTED]	12 That before completion of the deposition,
[REDACTED]	13 review of the transcript [x] was [] was not
[REDACTED]	14 requested. If requested, any changes made by the
15 MR. JACOBS: No further questions.	15 deponent (and provided to the reporter) during the
16 MS. DUNN: Okay. No further questions from	16 period allowed are appended hereto.
17 us, either. Thank you, Mr. Haas.	17 I further certify that I am not of counsel or
18 THE VIDEOGRAPHER: Keep your mics on for just	18 attorney for either or any of the parties to the said
19 a moment.	19 deposition, nor in any way interested in the event of
20 Madam Court Reporter, do you need anything on	20 this cause, and that I am not related to any of the
21 the record?	21 parties thereto.
22 STENOGRAPHIC REPORTER: Same order for	Dated: December 15, 2023
23 everyone?	23 
24 MS. DUNN: Yes, yes.	24 ANDREA M. IGNACIO, RPR, CRR, CCRR, CLR, CSR No. 9830
25 THE VIDEOGRAPHER: We've reached the end of	25
Page 355	
1 today's deposition, which consists of nine media	1 MICHAEL JACOBS, Esq.
2 files.	2 mjacobs@mofo.com
3 This is the end of File No. 9. We are going	3 December 15, 2023
4 off the record at 6:02 p.m.	4 RE: Arm Ltd. v. Qualcomm Inc., Et Al.
5 (WHEREUPON, the deposition ended at	5 12/12/2023, Rene Haas (#6326906)
6 6:02 p.m.)	6 The above-referenced transcript is available for
7 ---oOo---	7 review.
8	8 Within the applicable timeframe, the witness should
9	9 read the testimony to verify its accuracy. If there are
10	10 any changes, the witness should note those with the
11	11 reason, on the attached Errata Sheet.
12	12 The witness should sign the Acknowledgment of
13	13 Deponent and Errata and return to the deposing attorney.
14	14 Copies should be sent to all counsel, and to Veritext at
15	15 CS-NY@veritext.com
16	16
17	17 Return completed errata within 30 days from
18	18 receipt of testimony.
19	19 If the witness fails to do so within the time
20	20 allotted, the transcript may be used as if signed.
21	21
22	22 Yours,
23	23 Veritext Legal Solutions
24	24
25	25

90 (Pages 354 - 357)

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<p style="text-align: right;">Page 358</p> <p>1 Arm Ltd. v. Qualcomm Inc., Et Al. 2 Rene Haas (#6326906) 3 E R R A T A S H E E T 4 PAGE ____ LINE ____ CHANGE _____ 5 _____ 6 REASON _____ 7 PAGE ____ LINE ____ CHANGE _____ 8 _____ 9 REASON _____ 10 PAGE ____ LINE ____ CHANGE _____ 11 _____ 12 REASON _____ 13 PAGE ____ LINE ____ CHANGE _____ 14 _____ 15 REASON _____ 16 PAGE ____ LINE ____ CHANGE _____ 17 _____ 18 REASON _____ 19 PAGE ____ LINE ____ CHANGE _____ 20 _____ 21 REASON _____ 22 _____ 23 _____ 24 Rene Haas Date 25</p>	<p style="text-align: right;">Page 359</p> <p>1 Arm Ltd. v. Qualcomm Inc., Et Al. 2 Rene Haas (#6326906) 3 ACKNOWLEDGEMENT OF DEPONENT 4 I, Rene Haas, do hereby declare that I 5 have read the foregoing transcript, I have made any 6 corrections, additions, or changes I deemed necessary as 7 noted above to be appended hereto, and that the same is 8 a true, correct and complete transcript of the testimony 9 given by me. 10 _____ 11 _____ 12 Rene Haas Date 13 *If notary is required 14 SUBSCRIBED AND SWORN TO BEFORE ME THIS 15 _____ DAY OF _____, 20 _____. 16 _____ 17 _____ 18 _____ 19 NOTARY PUBLIC 20 _____ 21 _____ 22 _____ 23 _____ 24 _____ 25 _____</p>
--	--

91 (Pages 358 - 359)

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EXHIBIT 7

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

Page 1

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF DELAWARE

3
4 ARM LTD.,)
5)
6 Plaintiff and)
7 Counterclaim Defendant,)
8)
9 v.) C.A. No. 22-1146
10)
11) (MN)
12 QUALCOMM INC., QUALCOMM)
13 TECHNOLOGIES, INC. and NUVIA,)
14 INC.,)
15)
16 Defendants and)
17 Counterclaim Plaintiffs.)
18)
19
20
21
22
23
24
25

13 HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
14 VIDEO-RECORDED DEPOSITION OF WILL ABBEY

16 Friday, October 27, 2023
17 Palo Alto, California

23 Stenographically Reported By:

24 Hanna Kim, CLR, CSR No. 13083

25 Job No. 6165933

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

	Page 2	Page 4
1	IN THE UNITED STATES DISTRICT COURT	1 APPEARANCES OF COUNSEL: (CONTINUED)
2	FOR THE DISTRICT OF DELAWARE	2
3		3 ALSO PRESENT:
4	ARM LTD.,)	4 PHILLIP PRICE, Counsel for Arm Ltd.
5	Plaintiff and)	5 SHAWNA HYNES, Video Operator
6	Counterclaim Defendant,)	6
7	v.) C.A. No. 22-1146	7
8) (MN) QUALCOMM INC., QUALCOMM)	8
9	TECHNOLOGIES, INC. and NUVIA,)	9
10	INC.,)	10
11	Defendants and)	11
12	Counterclaim Plaintiffs.)	12
13		13
14	HIGHLY CONFIDENTIAL - ATTORNEYS' EYES	14
15	ONLY, video-recorded deposition OF WILL ABBEY taken	15
16	on behalf of the Defendants, at 755 Page Mill Road,	16
17	Palo Alto, California 94304, on Friday, October 27,	17
18	2023, beginning at 9:06 a.m., PDT, and concluding at	18
19	5:42 p.m., before Hanna Kim, CLR, Certified	19
20	Shorthand Reporter, No. 13083.	20
21		21
22		22
23		23
24		24
25		25
	Page 3	Page 5
1	APPEARANCES OF COUNSEL:	1 INDEX OF EXAMINATION
2		2
3	FOR PLAINTIFF ARM LTD.:	3 WITNESS: WILL ABBEY
4	MORRISON & FOERSTER LLP	4 EXAMINATION
5	BY: SCOTT F. LLEWELLYN, ESQ.	5 BY MS. MORGAN: 11
6	4200 Republic Plaza	6
7	370 Seventeenth Street	7
8	Denver, Colorado 80202-5638	8
9	303.592.2204	9
10	sllewellyn@mfo.com	10
11		11
12		12
13	FOR DEFENDANTS QUALCOMM INC., QUALCOMM	13
14	TECHNOLOGIES, INC. AND NUVIA, INC.:	14
15	PAUL, WEISS, RIFKIND, WHARTON & GARRISON	15
16	LLP	16
17	BY: ERIN J. MORGAN, ESQ.	17
18	BY: MADALYN VAUGHN, ESQ.	18
19	2001 K Street, N.W.	19
20	Washington, D.C. 20006-1047	20
21	202.223.7300	21
22	emorgan@paulweiss.com	22
23	mvaughn@paulweiss.com	23
24		24
25		25

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1	INDEX OF EXHIBITS		1	INDEX OF EXHIBITS (CONTINUED)	
2			2		
3	ABBEY DEPOSITION EXHIBITS	PAGE	3	ABBEY DEPOSITION EXHIBITS	PAGE
4	Exhibit QX19 E-mail from Tim Herbert,	79	4	Exhibit QX29 E-mail set, with top e-mail	337
5	18/01/2022, and attachment;		5	from Lynn Couillard,	
6	Bates nos. ARM_00088655		6	02/09/2022; Bates nos.	
7	through ARM_00088684		7	ARM_00094941 through ARM	
8	Exhibit QX20 E-mail set, with top e-mail	136	8	00094943	
9	from Rene Haas, 28/01/2021;		9	Exhibit QX30 E-mail Will Abbey,	349
10	Bates nos. ARM_00081998		10	02/05/2023, "Qualcomm Dispute	
11	Exhibit QX21 E-mail set, with top e-mail	146	11	- Protecting our Ecosystem";	
12	from Tim Herbert, 28/06/2021;		12	Bates nos. ARM_01215886	
13	Bates nos. ARM_00064035		13	--oo--	
14	through ARM_00064036		14		
15	Exhibit QX22 E-mail from Will Abbey,	184	15		
16	02/06/2021, and attachment;		16		
17	Bates nos. ARM_00000019		17		
18	through ARM_00000021		18		
19	Exhibit QX23 E-mail set, with top e-mail	218	19		
20	from Will Abbey, 01/06/2021;		20		
21	Bates nos. ARM_00110012		21		
22	through ARM_00110016		22		
23			23		
24			24		
25			25		
		Page 7		Page 9	
1	INDEX OF EXHIBITS (CONTINUED)		1	Palo Alto, California	
2			2	Friday, October 27, 2023; 9:06 a.m., PDT	
3	ABBEY DEPOSITION EXHIBITS	PAGE	3	--oo--	
4	Exhibit QX24 E-mail set, redacted, with top	251	4	THE VIDEOGRAPHER: Good morning. We are	
5	e-mail from RK Chunduru,		5	going on the record at 9:06 a.m., on October 27,	
6	8/24/2021; Bates nos.		6	2023.	
7	QCARM_3972038 through		7	Please note that the microphones are	
8	QCARM_3972039		8	sensitive and may pick up whispering and private	
9	Exhibit QX25 E-mail from Will Abbey,	264	9	conversations.	
10	31/08/2021, and attachment;		10	Please mute your phones at this time.	
11	Bates nos. ARM_00000016		11	Audio and video recording will continue to	
12	through ARM_00000018		12	take place unless all parties agree to go off the	
13	Exhibit QX26 E-mail from Will Abbey,	280	13	record.	
14	30/09/2021, and attachment;		14	This is Media Unit 1 of the video-recorded	
15	Bates nos. ARM_00081785		15	deposition of Will Abbey, taken by counsel for	
16	through ARM_00081787		16	Defendant, in the matter of Arm, Ltd., versus	
17	Exhibit QX27 E-mail set, with top e-mail	291	17	Qualcomm Inc., et al., filed in the United States	
18	from Will Abbey, 14/07/2021;		18	District Court, for the District of Delaware, Case	
19	Bates nos. ARM_00036331		19	Number 22-1146 MN.	
20	through ARM_00036334		20	The location of the deposition is 755 Page	
21	Exhibit QX28 E-mail from Will Abbey,	315	21	Mill Road, Palo Alto, California 94304.	
22	31/08/2022, "Arm News"; Bates		22	My name is Shawna Hynes, representing	
23	nos. ARM_01215564		23	Veritext Legal Solutions, and I am the videographer.	
24			24	The court reporter is Hanna Kim, from the	
25			25	firm Veritext Legal Solutions.	

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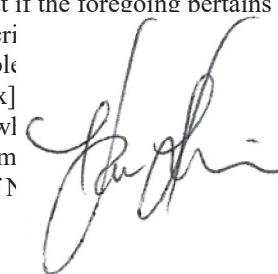
Page 10	Page 12
<p>1 I am not related to any party in this 2 action, nor am I financially interested in the 3 outcome.</p> <p>4 If there are any objections to proceeding, 5 please state them at the time of your appearance.</p> <p>6 Counsel and all present will now state 7 their appearances and affiliations for the record, 8 beginning with the noticing attorney.</p> <p>9 MS. MORGAN: Good morning. I'm Erin 10 Morgan from Paul Weiss. I'm here with my colleague 11 Madalyn Vaughn. And we represent the Defendants in 12 this case.</p> <p>13 MR. LLEWELLYN: Scott Llewellyn, Morrison 14 & Foerster, for Arm.</p> <p>15 With me is Phillip Price, in-house counsel 16 for Arm.</p> <p>17 THE VIDEOGRAPHER: Thank you. 18 Will the court reporter please swear in 19 the witness.</p> <p>20 ///</p> <p>21 ///</p> <p>22 ///</p> <p>23 ///</p> <p>24 ///</p> <p>25 ///</p>	<p>1 Q. Is there any reason you can't do that 2 today?</p> <p>3 A. No reason at all.</p> <p>4 Q. Okay. A funny thing about a deposition is 5 that everything that you say is being written down 6 by the court reporter.</p> <p>7 What that means is that even though you're 8 on video and even though in a normal conversation if 9 I ask you a question you could nod or say "mm-hmm" 10 or something like that and it would indicate a 11 response, for the court reporter, you have to give 12 an actual verbal response.</p> <p>13 So you should try to remember to do that. 14 I have the same issue. I nod when I'm responding. 15 I'll try to remind you. She'll remind both of us.</p> <p>16 But can you try to give a verbal response 17 when I ask you a question?</p> <p>18 A. I will.</p> <p>19 Q. Okay.</p> <p>20 Also for the court reporter, we have to 21 try not to talk over each other. It's weird. It's 22 not like a normal conversation where you can finish 23 someone's sentence, but we have to make an effort 24 for me to ask the question and then for you to 25 answer. I will try not to cut you off.</p>
Page 11	Page 13
<p>1 WILL ABBEY, 2 having been duly administered an oath over 3 videoconference as stipulated by all counsel, was 4 examined and testified as follows:</p> <p>5</p> <p>6 EXAMINATION</p> <p>7 BY MS. MORGAN:</p> <p>8 Q. Good morning.</p> <p>9 A. Good morning.</p> <p>10 Q. Can you state your name for the record?</p> <p>11 A. Will Abbey.</p> <p>12 Q. Okay. Mr. Abbey, have you ever been 13 deposed before?</p> <p>14 A. No. This is the first time.</p> <p>15 Q. Okay. So I'm sure your counsel has gone 16 over some of this with you, but I'm just going to 17 explain a couple of ground rules to you and -- and 18 make sure that you understand what we're doing 19 today.</p> <p>20 Okay?</p> <p>21 A. Yes, that's okay.</p> <p>22 Q. Okay. So you understand that you're under 23 oath at this deposition and that you're expected to 24 tell the truth in response to my questions; right?</p> <p>25 A. I do.</p>	<p>1 Can you try to do the same?</p> <p>2 A. Absolutely.</p> <p>3 Q. Again, as your colleagues know or as your 4 counsel knows, I will fail at this. So, you know, 5 it's not -- it's not the end of the world, but we 6 should just make an effort, and Hanna will keep us 7 in line.</p> <p>8 If you don't understand a question, you 9 should ask me to clarify.</p> <p>10 Does that make sense?</p> <p>11 A. It does.</p> <p>12 Q. Okay. And from time to time your attorney 13 may object. It's fine for you to go ahead and 14 answer. The objection is for the record, unless he 15 tells you specifically not to answer a question, 16 which typically would come up in the context of 17 privileged information, which I'm not going to be 18 seeking today.</p> <p>19 Do you understand?</p> <p>20 A. I do.</p> <p>21 Q. Okay. Do you have any questions before we 22 get started?</p> <p>23 A. No questions at all.</p> <p>24 Q. Okay. Oh, I should also say, I'm going to 25 try to take a break about every hour because</p>

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<p style="text-align: right;">Page 366</p> <p>1 [REDACTED]</p> <p>2 MR. LLEWELLYN: Objection. Form.</p> <p>3 THE WITNESS: Not to my knowledge.</p> <p>4 BY MS. MORGAN:</p> <p>5 Q. [REDACTED] [REDACTED] [REDACTED]</p> <p>9 A. I'm not aware of [REDACTED] [REDACTED] how -- how did you phrase it? That is -- 11 how did you phrase it?</p> <p>12 Q. That are [REDACTED] [REDACTED] [REDACTED]</p> <p>15 A. I'm not aware [REDACTED] 16 of doing that.</p> <p>17 Q. [REDACTED] [REDACTED] [REDACTED]</p> <p>20 A. Not to my knowledge.</p> <p>21 Q. [REDACTED] [REDACTED]</p> <p>23 MR. LLEWELLYN: Objection. Form.</p> <p>24 THE WITNESS: I -- I wouldn't know. Not 25 to my knowledge.</p>	<p style="text-align: right;">Page 368</p> <p>1 THE WITNESS: Thank you so much.</p> <p>2 THE VIDEOGRAPHER: Do you want to get your 3 orders on the record?</p> <p>4 MR. LLEWELLYN: No, I --</p> <p>5 THE VIDEOGRAPHER: This marks the -- one 6 moment.</p> <p>7 We are off the record at 5:42 p.m., and 8 this concludes today's testimony given by Will 9 Abbey. The total number of media used was seven and 10 will be retained by Veritext Legal Solutions.</p> <p>11 (Proceedings concluded, 5:42 p.m., PDT, on 12 October 27, 2023.)</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">Page 367</p> <p>1 BY MS. MORGAN:</p> <p>2 Q. [REDACTED] [REDACTED] [REDACTED]</p> <p>5 MR. LLEWELLYN: Objection. Form.</p> <p>6 THE WITNESS: It's hard to quantify that. 7 So I don't know for sure.</p> <p>8 BY MS. MORGAN:</p> <p>9 Q. [REDACTED] [REDACTED] [REDACTED]</p> <p>13 A. No.</p> <p>14 MR. LLEWELLYN: Objection. Form.</p> <p>15 THE WITNESS: [REDACTED] [REDACTED].</p> <p>18 MS. MORGAN: Mr. Abbey, I have no further 19 questions for you.</p> <p>20 THE WITNESS: You've made me happy. Thank 21 you very much.</p> <p>22 MR. LLEWELLYN: No questions. We're done.</p> <p>23 MS. MORGAN: So then we can congratulate 24 you on finishing your deposition and thank you for 25 your time. And we can go off the record.</p>	<p style="text-align: right;">Page 369</p> <p>1 CERTIFICATE OF REPORTER 2 I, Hanna Kim, a Certified Shorthand 3 Reporter, do hereby certify: 4 That prior to being examined, the witness 5 in the foregoing proceedings was by me duly sworn to 6 testify to the truth, the whole truth, and nothing 7 but the truth; 8 That said proceedings were taken before me 9 at the time and place therein set forth and were 10 taken down by me in shorthand and thereafter 11 transcribed into typewriting under my direction and 12 supervision; 13 I further certify that I am neither 14 counsel for, nor related to, any party to said 15 proceedings, not in anywise interested in the 16 outcome thereof. 17 Further, that if the foregoing pertains to 18 the original transcri 19 case, before comple 20 of the transcript [x] 21 In witness wl 22 subscribed my nam Dated: 1st day of N 23 24 25</p> <p style="text-align: right;">Hanna Kim CLR, CSR No. 13083</p> 

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<p style="text-align: right;">Page 370</p> <p>1 SCOTT F. LLEWELLYN, ESQ. 2 sllewellyn@mofo.com 3 November 1, 2023 4 RE: ARM Ltd. v. Qualcomm Inc., Et Al. 5 10/27/2023, Will Abbey (#6165933) 6 The above-referenced transcript is available for 7 review. 8 Within the applicable timeframe, the witness should 9 read the testimony to verify its accuracy. If there are 10 any changes, the witness should note those with the 11 reason, on the attached Errata Sheet. 12 The witness should sign the Acknowledgment of 13 Deponent and Errata and return to the deposing attorney. 14 Copies should be sent to all counsel, and to Veritext at 15 cs-ny@veritext.com. 16 17 Return completed errata within 30 days from 18 receipt of testimony. 19 If the witness fails to do so within the time 20 allotted, the transcript may be used as if signed. 21 22 Yours, 23 Veritext Legal Solutions 24 25</p>	<p style="text-align: right;">Page 372</p> <p>1 JURAT 2 3 I, WILL ABBEY, do hereby certify under 4 penalty of perjury that I have read the foregoing 5 transcript of my deposition taken on Friday, 6 October 27, 2023; that I have made such corrections 7 as appear noted herein in ink, initialed by me; that 8 my testimony as contained herein, as corrected, is 9 true and correct. 10 11 Dated this _____ day of _____, 2023, 12 at _____. 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p style="text-align: right;">WILL ABBEY</p>
<p style="text-align: right;">Page 371</p> <p>1 ERRATA SHEET FOR THE TRANSCRIPT OF: 2 Case Name: ARM, LTD. vs. QUALCOMM, ET AL. 3 Dep. Date: OCTOBER 27, 2023 4 Deponent: WILL ABBEY 5 CORRECTIONS: 6 Pg. Ln. Now Reads Should Read Reason 7 _____ 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 Signature of Deponent 21 SUBSCRIBED AND SWORN BEFORE ME 22 THIS ____ DAY OF _____, 2023. 23 _____ 24 (Notary Public) MY COMMISSION 25 EXPIRES: _____</p>	

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EXHIBIT 8

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Page 1

1 H I G H L Y C O N F I D E N T I A L

2 ATTORNEYS' EYES ONLY

3 IN THE UNITED STATES DISTRICT COURT

4 FOR THE DISTRICT OF DELAWARE

5 C.A. NO: 22-1146 (MN)

6 -----
7 ARM LTD., a UK Corporation,

8
9 Plaintiff,

10 v.

11 QUALCOMM INC., a Delaware corporation,

12 QUALCOMM TECHNOLOGIES, INC., a

13 Delaware Corporation, and NUVIA, INC., a

14 Delaware Corporation,

15 Defendants.

16 -----
17 Deposition of PAUL WILLIAMSON, taken by AILSA
18 WILLIAMS, Certified Court Reporter, held at the
19 offices of Norton Rose Fulbright, London, United
20 Kingdom, on 9 November, 2023 at 9:00 a.m

21

22

23

24

25

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1 APPEARANCES: 2 Attorneys for the Plaintiff: 3 MORRISON & FOERSTER LLP 4 BY: KYLE W.K. MOONEY 5 Kmooney@mofo.com 6 7 For the Defendants: 8 PAUL, WEISS, RIFKIND, WHARTON & GARRISON 9 LLP 10 BY: MELISSA FELDER ZAPPALA and BRIAN SHIUE 11 Mzappala@paulweiss.com 12 Bshiue@paulweiss.com 13 14 ALSO PRESENT: 15 PHILIP PRICE: (ARM) 16 COURT REPORTER: AILSA WILLIAMS 17 VIDEOGRAPHER: PHILIP HILL 18 19 20 21 22 23 24 25	Page 2	1 QX59 Email and attachments, ARM_00048483-84 ...147 2 QX60 Email and attachments, ARM_00032623-25 ...158 3 QX61 Email and attachments, ARM_00032605-06 ...168 4 QX62 Email and attachments, ARM_00032598-99 ...184 5 QX63 Email exchange, ARM_00095801-02190 6 QX64 Teams Chat, ARM_00098825-27193 7 QX65 Email and attachments, ARM_01294035-36 ...198 8 QX66 Teams Chat, ARM_00115764203 9 QX67 Teams Chat and Slide Deck,221 10 ARM_00082120-31 11 QX68 Team Chat, ARM_00081197229 12 QX69 Complaint240 13 QX70 Email exchange, ARM_01238950-54253 14 QX71 ARM-Samsung Slide Deck,262 15 ARM_01240527-94 16 QX72 Teams Chat, ARM_00087733-35272 17 QX73 Email exchange, ARM_01231257-59295 18 QX74 "Growth Opportunities: Progress305 19 Report", ARM_01291819-62 20 21 22 23 24 25
1 2 I N D E X 3 PAUL WILLIAMSON (Sworn) 4 Examination by MS. ZAPPALA: Pg. 6 5 Examination by MR. MOONEY: Pg. 310 6 Further Examination by MS. ZAPPALA: Pg. 314 7 8 INDEX OF EXHIBITS 9 Previously Marked Exhibits Referenced: 10 Exhibit QX 19, Exhibit QX29 11 QX45 Notice of Deposition8 12 QX46 Email exchange ARM_01238940-4413 13 QX47 Teams Chat ARM_00087671-7314 14 QX48 Teams Chat ARM_01241616-2031 15 QX49 Technology License Agreement47 16 QX50 Annex 1, ARM_00111082-9748 17 QX51 Teams Chat, ARM_0008785156 18 QX52 Teams Chat, ARM_01242365-6666 19 QX53 Email exchange, ARM_00063607-1071 20 QX54 "ARM - Qualcomm & Nuvia Architecture ...78 21 License" 22 QX55 Annex 1, ARM_00002654-6788 23 QX56 Teams Chat, ARM_01239039-4594 24 QX57 Teams Chat, ARM_00082090-93119 25 QX58 Email and attachments, ARM_00032601-02 ...144	Page 3	1 THE VIDEOGRAPHER: Good morning. We are 09:26 2 going on the record. The time is 09:24 a.m. local 09:26 3 time in London, UK, on November 9, 2023. 09:26 4 This is the beginning of media number 09:27 5 one, volume one, in the video recorded deposition 09:27 6 of Paul Williamson, taken by counsel for plaintiff 09:27 7 in the matter of ARM Limited versus Qualcomm Inc 09:27 8 et al, filed in the United States District Court 09:27 9 for the District of Delaware, case number/docket 09:27 10 number C.A No: 22-1146 (MN). 09:27 11 This deposition is being held at Norton 09:27 12 Rose Fulbright at the London office. 09:27 13 My name is Philip Hill from Veritext 09:27 14 Legal Solutions and I am the videographer. The 09:27 15 court reporter is Ailsa Williams, also from 09:27 16 Veritext Legal Solutions. 09:27 17 Please would counsel introduce 09:27 18 themselves for the record. 09:27 19 MS. ZAPPALA: Melissa Zappala, on behalf 09:28 20 of defendant, of Paul Weiss. With me is my 09:28 21 colleague, Brian Shiue. One correction for the 09:28 22 record, this deposition is being taken by 09:28 23 defendants and counter claimants. 09:28 24 MR. MOONEY: Kyle Mooney, Morrison and 09:28 25 Foerster, counsel for ARM and with me is Philip 09:28

2 (Pages 2 - 5)

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	Page 6		Page 8	
1	Price Senior Director and Head of Litigation at	09:28	1 Q Let me share with you the deposition	09:30
2	ARM.	09:28	2 notice. So this would be marked as Exhibit QX45.	09:30
3	THE VIDEOGRAPHER: Would the court	09:28	3 (Exhibit QX45 marked for identification)	09:31
4	reporter swear in the witness.	09:28	4 I have put in front of you as QX45 our	09:31
5	PAUL WILLIAMSON	09:28	5 notice 30(b)(6) deposition notice. I wanted to	09:31
6	Having been sworn,	09:28	6 make sure we are on the same page in terms of the	09:31
7	Testified as follows:	09:28	7 topics that you will be testifying about in your	09:31
8	EXAMINATION BY MS. ZAPPALA:	09:28	8 corporate representative capacity. I understand	09:31
9	MS. ZAPPALA: Good morning.	09:28	9 they are topics -- the topics start on page 4.	09:31
10	A Good morning.	09:28	10 I understand you to be testifying on topics 1, 20,	09:31
11	Q Could you state your name for the	09:28	11 21, 23, 25, 27, 28, 30, 31, 33, 34, 35, 36, 37,	09:31
12	record.	09:28	12 40, 41, and 59. Is that consistent with your	09:32
13	A My name is Paul Williamson.	09:28	13 understanding?	09:32
14	Q I am Melissa Zappala. I will be	09:28	14 MR. MOONEY: Counsel, let me jump in so	09:32
15	taking your deposition today. I just wanted to go	09:28	15 the witness doesn't become uncomfortable because	09:32
16	over a couple of ground rules for the deposition.	09:29	16 he doesn't remember all the numbers. Let me	09:32
17	One thing I wanted to note, I have a	09:29	17 represent that yes, Mr. Williamson is designated	09:32
18	hearing loss. It affects my speech. You are	09:29	18 to testify as to topics 1, 20, 21, 23, 25, 27, 28,	09:32
19	British, you have an accent, so we may have a	09:29	19 30, 31, 33, 34, 35, 36, 37, 40, 41 and 59,	09:32
20	sense of dueling accents here. If you can't	09:29	20 consistent with ARM's objections and the	09:32
21	understand anything I say, please ask me to repeat	09:29	21 agreements reached between the parties, as well as	09:32
22	myself. Likewise, if I have difficulty I hope you	09:29	22 any objections that are made today, but subject to	09:33
23	will indulge me by repeating the answer.	09:29	23 that the list of numbers I think does match what	09:33
24	A Absolutely, and I appreciate you	09:29	24 you read out.	09:33
25	sharing that with me.	09:29	25 MS. ZAPPALA: Thank you. If I had just	09:33
	Page 7		Page 9	
1	Q So we have a clean record I will be	09:29	1 asked your counsel that would have been easiest.	09:33
2	asking questions, I would appreciate if you would	09:29	2 Okay. So we are agreed between counsel	09:33
3	wait for me to finish my question and likewise	09:29	3 we are going to combine your individual testimony	09:33
4	I will wait for you to finish your answer, so that	09:29	4 with the corporate representative testimony. For	09:33
5	the court reporter can take down what we are both	09:29	5 the sake of efficiency on the record, if we get to	09:33
6	saying. Is that okay?	09:29	6 a set of questions on which you have been	09:33
7	A I understand, yes.	09:29	7 designated that you don't have personal knowledge	09:33
8	Q And if at any time you need a	09:29	8 of, please let me know so then we can make a	09:33
9	break, please ask and we can accommodate that.	09:29	9 record that you don't have personal knowledge of	09:33
10	Also, in terms of the natural pattern of	09:29	10 the issue but are testifying as a corporate	09:33
11	human speech, people tend to say "uh-huh", nod	09:29	11 representative. Does that make sense?	09:33
12	their head. It is important for the deposition	09:30	12 MR. MOONEY: Objection.	09:33
13	transcript to give audible answers. I would	09:30	13 A Yes.	09:33
14	appreciate if you keep that in mind.	09:30	14 MR. MOONEY: I'm not even following	09:33
15	A Understood.	09:30	15 this.	09:33
16	Q Is there any reason you cannot give	09:30	16 MS. ZAPPALA: We are going to ask	09:33
17	truthful testimony today?	09:30	17 questions because a lot of the topics on which he	09:33
18	A None.	09:30	18 has been designated will lead into his personal	09:33
19	Q We are here today taking your	09:30	19 knowledge, so we are not going topic by topic, we	09:33
20	deposition in your personal capacity as an	09:30	20 are combining the record.	09:34
21	individual witness, but you understand that you	09:30	21 MR. MOONEY: That is fine but you are	09:34
22	have been designated as a corporate representative	09:30	22 asking him to tell you if he doesn't have personal	09:34
23	on behalf of ARM on a few topics. Do you have	09:30	23 knowledge or if he does for each question? I am	09:34
24	that understanding?	09:30	24 not following this.	09:34
25	A I do.	09:30	25 MS. ZAPPALA: No, I am saying if we get	09:34

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		Page 238			Page 240
1	with this lawsuit?	17:25		[REDACTED]	17:29
2	A ARM brought this lawsuit in order to	17:25	2	it is one of many remedies that could be sought in	17:29
3	protect its intellectual property rights, ensure	17:25	3	conjunction with seeing our contractual terms	17:29
4	that our contracts are enforceable and enforced	17:25	4	obliged with.	17:29
5	and that our reputation is protected as an IP	17:26	5	Q I am going to add as QX69 a copy of	17:29
6	licensing business, among other things.	17:26	6	the complaint by ARM in this litigation.	17:29
7	Q [REDACTED] [REDACTED]	[REDACTED]	7	(Exhibit QX69 marked for identification.)	17:29
	[REDACTED] ?	17:26	8	I direct you to paragraph 68 on page 18.	17:29
10	MR. MOONEY: Objection, form. Vague.	17:26	9	Paragraph 68 says:	17:30
11	A [REDACTED] [REDACTED]	[REDACTED]	10	"ARM is entitled to specific performance	17:30
	[REDACTED] [REDACTED]	[REDACTED]	11	requiring defendants [REDACTED]	[REDACTED]
	[REDACTED]	17:26		[REDACTED] [REDACTED]	[REDACTED]
15	Q And when you say that the	17:26		[REDACTED]	17:30
16	obligations and provisions in the licensing deals	17:26	18	Do you see that?	17:30
17	are respected, then one outcome of that would be	17:26	19	A I see that clause, yes.	17:30
18	that Qualcomm would not manufacture custom CPUs	17:27	20	Q And that is an outcome that ARM is	17:30
19	using Nuvia technology. Right?	17:27	21	seeking in connection with the litigation, right?	17:30
20	MR. MOONEY: Objection, form. Vague.	17:27	22	A That is how it is presented in the	17:30
21	A So my understanding is that if our	17:27	23	document, correct.	17:30
22	contractual provisions are met, that -- sorry.	17:27	24	Q And is it correct that ARM is	17:31
23	MR. MOONEY: Apologies. For the record,	17:27	25	seeking specific performance in this litigation?	17:31
24	I was startled that my microphone was on the	17:27			
25	table. Do you want to ask the question again so	17:27			
		Page 239			Page 241
1	you can get that cleanly.	17:27	1	MR. MOONEY: Objection, form, vague.	17:31
2	MS. ZAPPALA: When you say that the	17:27	2	Seeks a legal conclusion and characterization.	17:31
3	[REDACTED] [REDACTED]	[REDACTED]	3	MS. ZAPPALA: Well, topic 35 of our	17:31
	[REDACTED] [REDACTED]	[REDACTED]	4	30(b)(6) notice seeks testimony about ARM's	17:31
	[REDACTED]	17:27	5	request for specific performance in this action,	17:31
7	MR. MOONEY: Objection, form. Vague.	17:27	6	so with that is it correct that ARM is seeking	17:31
8	A I don't think that that necessarily	17:27	7	specific performance in this action?	17:31
9	follows. [REDACTED] [REDACTED]	[REDACTED]	8	MR. MOONEY: Same objection, same	17:31
	[REDACTED] [REDACTED]	[REDACTED]	9	grounds. The witness is designated on topic 35 to	17:31
	[REDACTED] [REDACTED]	[REDACTED]	10	testify to facts concerning ARM's request for	17:31
	[REDACTED] [REDACTED]	[REDACTED]	11	specific performance in this action. My objection	17:31
	[REDACTED] [REDACTED]	17:28	12	is merely that the witness may not be well versed	17:31
16	Q I want to understand. One intended	17:28	13	in the legalese "specific performance" but any	17:32
17	outcome of this litigation is that [REDACTED]	[REDACTED]	14	facts relating to the request you can ask.	17:32
	[REDACTED] Is that	17:28	15	A I am not familiar with the legal	17:32
19	correct?	17:28	16	ramifications of the terminology of "specific	17:32
20	MR. MOONEY: Objection, form. Vague.	17:28	17	performance", as I am not a legal expert, but I	17:32
21	A So again not words that I would use	17:28	18	would agree with you that we are in this clause	17:32
22	to describe the intended outcome. The intended	17:28	19	here clearly stating that we are entitled to	17:32
23	outcome is the contractual obligations are	17:28	20	specific performance and whatever legal	17:32
24	respected. One of those that I believe that you	17:28	21	connotations that has in requiring that the Nuvia	17:32
25	are referring to [REDACTED]	17:29	22	termination provisions are met.	17:32
			23	Q Paragraph 68 is [REDACTED]	[REDACTED]
				[REDACTED] right?	17:32

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1	MR. MOONEY: Objection, mischaracterizes the paragraph.	17:33	1 significance of damage that people not complying with IP license agreements could have to a	17:36
3	A I don't see -- I see this as a statement that ARM is entitled to require the defendant to conform with that. I don't see	17:33	3 business which is dependent on IP licensing and I think that has harm within and beyond our	17:36
6	wording that says we request the court to enforce that that happens, but that might be -- I am not	17:33	5 industry.	17:36
9	Q Let me start again. So you say in paragraph 68:	17:33	6 Q [REDACTED]	[REDACTED]
11	[REDACTED]	17:33	[REDACTED]	[REDACTED]
16	Right?	17:33	[REDACTED]	17:36
17	A That is the wording in front of me,	17:33	10 MR. MOONEY: Objection, vague,	17:36
18	and yes, that is what we are stating.	17:33	11 speculation.	17:36
19	Q Is ARM seeking any damages from Qualcomm in connection with this litigation?	17:33	12 A [REDACTED]	[REDACTED]
21	MR. MOONEY: Objection, beyond the scope of the 30(b)(6) notice.	17:34	[REDACTED]	17:37
23	A ARM believes that the actions related to this have caused multiple harms and	17:34	15 Q When you say "future damages of this are inestimable", what do you mean by that?	17:37
24	damages may be one of multiple outcomes that ARM	17:34	17 A I mean that ARM's business is fundamentally defined by our ability to protect and license our technology. It supports not only our revenues but the revenues of many of our partners in our broader ecosystem, and they are dependent on ARM continuing to manage the technology and manage the licensing and rights associated with it. So I think it brings risk and	17:37
25		17:34	24 damages to ARM, ARM's future business and	17:37
	Page 243		Page 245	
1	may be entitled to in relation to failure to comply with contractual terms.	17:34	1 significant businesses that are built on the structure of access to technology that we have	17:37
3	Q You say that ARM has suffered multiple harms. Can you identify those harms for	17:34	2 built, but as I said that is not the only damages	17:38
5	me?	17:34	4 it provides, but it is certainly a very	17:38
6	A So there are multiple harms,	17:34	5 significant concern for ARM.	17:38
7	including potentially loss of revenue, which we	17:34	6 Q You said ARM needs to continue to	17:38
8	have discussed, but also reputational damage and a	17:34	7 manage the technology and manage the licensing and	17:38
9	fundamental long-term business challenge created	17:35	8 rights associated with it. Has ARM had any	17:38
10	by a potential situation where ARM licensees do	17:35	9 difficulty doing so?	17:38
11	not feel bound to the terms of our contracts. So	17:35	10 A ARM continues our business as usual	17:38
12	it is harmful to our business in broader terms	17:35	11 at this stage, but the impact of companies	17:38
13	than purely lost revenues, but that is not	17:35	12 conducting action similar to this, where they	17:38
14	exhaustive.	17:35	13 breach or move outside of our existing agreements,	17:39
15	Q When you say Qualcomm conducted harm	17:35	14 would be significantly harmful, and we believe	17:39
16	to ARM's business in broader terms including lost	17:35	15 that that is a real and meaningful consequence to	17:39
17	revenue, I want to make sure I understand how this	17:35	16 ARM and our ecosystem.	17:39
18	harm fell. You mentioned reputational damage.	17:35	17 Q Are you aware of any companies	17:39
19	You also mentioned that ARM licensees might not	17:35	18 conducting actions similar to this?	17:39
20	feel bound to the terms of their licenses. Is	17:35	19 A I am not aware of immediate action.	17:39
21	there any other harm other than loss off revenue	17:35	20 Q Are you aware of any company that	17:39
22	that you can identify?	17:36	21 are intending to take actions similar to this?	17:39
23	MR. MOONEY: Objection, form.	17:36	22 A It would be speculation as to what	17:39
24	Mischaracterizes testimony.	17:36	23 others might do in response to the outcome of this	17:39
25	A I think it is hard to understate the	17:36	24 litigation, but I am not aware or party to	17:39
			25 discussions or what people might be doing in	17:39

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1 response to it.	17:39	1 [REDACTED] [REDACTED]
2 Q You also mentioned reputational	17:39	[REDACTED] [REDACTED]
3 damage. Can you explain that to me a bit more?	17:39	[REDACTED] 17:43
4 A ARM has a reputation of trust with	17:40	4 A As I said, a [REDACTED] [REDACTED]
5 its partners who build technology based on ARM's	17:40	[REDACTED] [REDACTED]
6 technology and services associated with it. Their	17:40	[REDACTED] 17:43
7 success is a shared success business with ARM, and	17:40	[REDACTED] 17:43
8 trust is an important element of that continuing	17:40	[REDACTED] 17:43
9 business practice.	17:40	[REDACTED] 17:43
10 Q And how have Qualcomm and Nuvia's	17:40	8 Q I am going to reask the previous 17:43
11 activities impacted ARM's reputation of trust?	17:40	9 question a different way. [REDACTED] [REDACTED]
12 A Should we not protect our	17:40	12 A It is impossible for me to know the 17:43
13 technology, it could impact the trust that	17:40	13 [REDACTED] [REDACTED]
14 companies more broadly feel in the ARM business	17:40	[REDACTED] [REDACTED]
15 model and the security with which they can build	17:40	[REDACTED] 17:43
16 their business based on ARM's technology.	17:41	[REDACTED] 17:43
17 Q [REDACTED] [REDACTED]	17:41	17 Q And are you aware of [REDACTED] [REDACTED]
[REDACTED] [REDACTED]	17:41	[REDACTED] 17:44
[REDACTED] [REDACTED]	17:41	20 A I missed the end of the question. 17:44
22 A I am not aware of direct examples or	17:41	21 Q Are you aware of [REDACTED] [REDACTED]
23 actions yet, but the process is ongoing.	17:41	[REDACTED] ? 17:44
24 Q When you say "process is ongoing",	17:41	24 A So as I said, it is [REDACTED] [REDACTED]
25 what do you mean?	17:41	[REDACTED] 17:44
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1 A Sorry, the litigation process.	17:41	1 [REDACTED] [REDACTED]
2 Q [REDACTED] [REDACTED]	17:41	[REDACTED] [REDACTED], but I don't have specific 17:44
[REDACTED] [REDACTED]	17:41	4 evidence to present to that and I would be 17:44
5 A I am not aware of a current case.	17:42	5 unlikely to see it. 17:44
6 [REDACTED] [REDACTED]	17:42	6 Q How has ARM been harmed as a result 17:45
[REDACTED] [REDACTED]	17:42	7 of [REDACTED] [REDACTED] 17:45
[REDACTED] [REDACTED]	17:42	9 MR. MOONEY: Form, vague. 17:45
[REDACTED] [REDACTED]	17:42	10 A Qualcomm [REDACTED] [REDACTED]
[REDACTED] [REDACTED]	17:42	that I am aware of or 17:45
14 Q And you don't know how many	17:42	12 released them for many years, so as yet, pursuant 17:45
15 companies [REDACTED] [REDACTED]	17:42	13 [REDACTED] [REDACTED], harm has not been caused yet, 17:45
[REDACTED] [REDACTED]	17:42	14 but that does not speak to the Nuvia agreement. 17:45
17 A It is impossible to know what is not	17:42	15 Q What do you mean when you reference 17:45
18 communicated to us by our partners,	17:42	16 the Nuvia agreement? 17:45
[REDACTED] [REDACTED]	17:42	17 A My understanding, and maybe we need 17:45
[REDACTED] [REDACTED]	17:42	18 to restate the question was you asked me, cores 17:45
[REDACTED] [REDACTED]	17:42	19 [REDACTED] I am not aware of 17:46
[REDACTED] [REDACTED]	17:42	20 any cores that have been recently developed by 17:46
25 Q And are you aware of [REDACTED]	17:43	21 [REDACTED] [REDACTED], so I can't speak to 17:46
[REDACTED]	17:43	22 harms that relate to that. 17:46
[REDACTED]	17:43	23 Q Do you understand that Qualcomm's 17:46
[REDACTED]	17:43	24 position is that it [REDACTED] [REDACTED]
		17:46

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		Page 314			Page 316	
1	they sent those messages?	19:46		1	transcript and video.	19:49
2	A No.	19:46		2	MR. MOONEY: Counsel are both agreed	19:49
3	Q [REDACTED]	[REDACTED]		3	they would like transcripts and videos of this	19:49
	[REDACTED]	[REDACTED]		4	deposition.	19:49
	[REDACTED]	19:46		5	MR. SHIUE: Quickly if possible.	19:49
7	A No.	19:46		6	MS. ZAPPALA: Okay, thank you.	19:50
8	MR. MOONEY: No further questions.	19:46		7	THE VIDEOGRAPHER: Thank you.	19:50
9	Further Examination by MS. ZAPPALA:	19:46		8		
10	MS. ZAPPALA: One redirect. So counsel	19:47		9		
11	asked you a number of questions about whether you	19:47		10		
12	[REDACTED]	[REDACTED]		11		
	[REDACTED]	19:47		12		
14	A Yes.	19:47		13		
15	Q At the time that you sent those	19:47		14		
16	messages, were the real comments in those messages	19:47		15		
17	your best understanding of the situation at the	19:47		16		
18	time that you sent them?	19:47		17		
19	MR. MOONEY: Objection, form, compound.	19:47		18		
20	A As we discussed earlier, these were	19:47		19		
21	my speculations as to potential impact which would	19:47		20		
22	reflect my limited understanding at the time.	19:47		21		
23	Q Right, so at the time that you sent	19:47		22		
24	those Teams messages they reflected your	[REDACTED]		23		
	[REDACTED]	19:47		24		
	[REDACTED]	19:47		25		
		Page 315			Page 317	
1	MR. MOONEY: Objection, form, vague.	19:48		1	CERTIFICATE OF WITNESS	
2	A I would say more than limited. I	19:48		2		
3	don't believe I had [REDACTED]	[REDACTED]		3	I, Paul Williamson, am the witness in the	
	[REDACTED] the point at which I sent these messages.	19:48		4	foregoing deposition. I have read the foregoing	
5	Q But you sent messages reflecting	19:48		5	statement and, having made such changes and	
6	what you understood [REDACTED]	[REDACTED]		6	corrections as I desired, I certify that the	
	[REDACTED] right, even though right now you say it	19:48		7	transcript is a true and accurate record of my	
8	is speculation?	19:48		8	responses to the questions put to me on Thursday,	
9	MR. MOONEY: Objection, form, vague,	19:48		9	9 November, 2023.	
10	compound.	19:48		10		
11	A I speculated as to the potential	19:48		11		
12	impact, should certain outcomes occur without	19:48		12		
13	understanding or having viewed the Nuvia ALA.	19:48		13		
14	MS. ZAPPALA: No further questions.	19:48		14		
15	MR. MOONEY: Nothing further.	19:48		15	Paul Williamson	
16	THE VIDEOGRAPHER: Going off the record.	19:48		16		
17	The time is 19:46. End of media card number	19:48		17		
18	seven. End of the video deposition of Paul	19:48		18		
19	Williamson.	19:49		19		
20	Please can all parties state their	19:49		20		
21	transcripts or video orders for clarity, thank	19:49		21		
22	you.	19:49		22		
23	MR. MOONEY: I would like to order a	19:49		23		
24	transcript.	19:49		24		
25	MS. ZAPPALA: I would like to order a	19:49		25		

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1 CERTIFICATE OF COURT REPORTER
 2
 3 I, AILSA WILLIAMS, an Accredited LiveNote
 4 Reporter, hereby certify that Paul Williamson was
 5 duly sworn, that I took the Stenograph notes of
 6 the foregoing deposition and that the transcript
 7 thereof is a true and accurate record transcribed
 8 to the best of my skill and ability. I further
 9 certify that I am neither counsel for, related to,
 10 nor employed by any of the parties to the action
 11 in which the deposition was taken, and that I am
 12 not a relative or employee of any attorney or
 13 counsel employed by the parties hereto, nor
 14 financially or otherwise interested in the outcome
 15 of the action.
 16 Before completion of the deposition, review of the
 17 transcript was requested. Any changes made by the
 18 deponent (and provided to the reporter) during the
 19 period allowed are appended hereto.

20
 21
 22

23 AILSA WILLIAMS

24 Dated: 11/14/23

25

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1 ERRATA SHEET
 2 VERITEXT/NEW YORK REPORTING, LLC
 3
 4 CASE NAME: ARM Ltd. v. Qualcomm Inc., Et Al.
 5 DATE OF DEPOSITION: 11/9/2023
 6 WITNESSES' NAME: Paul Williamson
 7
 8 PAGE LINE (S) CHANGE REASON
 9 _____ _____ _____
 10 _____ _____ _____
 11 _____ _____ _____
 12 _____ _____ _____
 13 _____ _____ _____
 14 _____ _____ _____
 15 _____ _____ _____
 16 _____ _____ _____
 17 _____ _____ _____
 18 _____ _____ _____
 19 _____ _____ _____
 20 _____ _____ _____
 21
 22 Paul Williamson
 23 SUBSCRIBED AND SWORN TO BEFORE ME
 24 THIS ____ DAY OF _____, 20 _____.
 25 (NOTARY PUBLIC) MY COMMISSION EXPIRES:

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EXHIBIT 9

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**UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE**

-----X
:
ARM LTD., a U.K. corporation, :
:
Plaintiff, :
: Civil Action No.
v. : 1:22-cv-01146
:
QUALCOMM INC., a Delaware :
corporation, QUALCOMM :
TECHNOLOGIES INC., a Delaware :
corporation, and NUVIA, INC., a :
Delaware corporation, :
:
Defendants. :
:
-----X

EXPERT REPORT OF PROFESSOR GUHAN SUBRAMANIAN

DECEMBER 20, 2023

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I. BACKGROUND

A. Qualifications

1. I serve as the H. Douglas Weaver Professor of Business Law at the Harvard Business School (“HBS”) and the Joseph Flom Professor of Law and Business at the Harvard Law School (“HLS”). I am the first person in the history of Harvard University to hold tenured appointments at both HBS and HLS. I have taught at HBS and/or HLS continuously since 1999. At Harvard I serve as the faculty chair for the JD/MBA program and the Advisory Committee on Shareholder Responsibility. I hold degrees in Economics, Law, and Business from Harvard University.
2. My research and publications focus on issues of corporate negotiations, corporate law, and corporate governance. I am a co-author (with former Delaware Chancellor William T. Allen and HLS professor Reiner Kraakman) of *Commentaries and Cases on the Law of Business Organization* (4th ed. 2012), a leading textbook on corporate law. I am also the author of *Dealmaking: The New Strategy of Negotiations* (2nd ed. 2020) (“Dealmaking”), a practitioner-oriented book that provides guidance for managing complex business transactions.
3. I am the co-author of *Deals: The Economic Structure of Business Transactions* (forthcoming Harvard University Press 2024). This book provides an economic

analysis of deal terms in corporate transactions. It examines challenges such as moral hazard, information asymmetries, and asset specificity, and then describes how deal terms can be used to overcome these barriers to contracting. Economics Nobel Prize Winner Oliver Hart states: “Klausner and Subramanian’s book will be an invaluable resource for anyone who wants to understand real-world contracts and deals. The authors present many interesting cases and skillfully use basic economic ideas to understand them. There are many insights for practitioners, but academics will also learn a great deal and will be stimulated to refine their theories.”

4. Twelve of my academic articles have been selected by scholars in the field as being among the “top ten” articles published in corporate and securities law in their respective years, among the 400+ articles that are published each year. The two-volume treatise *Law and Economics of Mergers and Acquisitions*, which includes thirty-three “seminal” articles published over the past fifty years, contains four of my articles, more than from any other scholar.¹ My article Corporate Governance 2.0, was selected as a McKinsey Award finalist for best article published in the *Harvard Business Review* in 2015.

¹ *Law and Economics of Mergers and Acquisitions*. Eds. Steven Davidoff Solomon and Claire A. Hill. United Kingdom: Edward Elgar Publishing (2013).

5. In 2013, I delivered the annual Pileggi Lecture to the Delaware judiciary, members of the Delaware bar, and law students in Wilmington, Delaware. According to the *Delaware Journal of Corporate Law*, the lecturer is always “a leading voice in corporate law.”² In his introduction of my lecture, former Delaware Supreme Court Chief Justice Leo Strine stated: “[T]oday we have a speaker who epitomizes excellence in corporate law.”³
6. I have been similarly recognized by the members of the Delaware Chancery Court. In October 2018, for example, Vice Chancellor Sam Glasscock noted that “Professor Guhan Subramanian is a recognized expert in corporate affairs ... and has been recognized by this Court as helpful on many occasions.”⁴ Delaware Chancellor Kathaleen McCormick recently observed that my “published work concerning policy questions of corporate law fill the footnotes of many decisions of Delaware courts.”⁵
7. At HLS, I teach the basic course on Corporate Law. I also teach a joint course between HLS and HBS entitled *Deals*, which focuses on complex business

² Lectures & Symposia. *Delaware Journal of Corporate Law*. <<https://djcl.org/symposium-lectures>> (accessed Feb. 27, 2023); “Past Pileggi Lecture Keynote Speakers.” *Delaware Journal of Corporate Law*. <<https://djcl.org/home-2-2-2-2>> (accessed Feb. 27, 2023).

³ Video on file with author.

⁴ *In re Starz Appraisal*, No. 12968-VCG, 2018 WL 4922095, at *1 (Del. Ch. Oct. 10, 2018).

⁵ *In re Williams Cos. Stockholder Litigation*, No. 2020-0707-KSJM, 2021 WL 754593, at 24 n. 141 (Feb. 26, 2021). At the time of the opinion, Kathaleen McCormick was Vice Chancellor.

transactions.⁶ At HBS, I teach in several executive education programs, such as *Strategic Negotiations*, *Changing the Game*, *Making Corporate Boards More Effective*, and *Preparing to be a Corporate Director*. I am the faculty chair for the week-long HBS executive education course *Mergers & Acquisitions*, and within that course I teach the module on “Deal Execution.” I also present on developments in corporate governance and transactional practice to the American College of Corporate Directors, a national association of public-company directors.

8. Since 2018, I have served as the faculty chair for the HLS Program on Negotiation (“PON”).⁷ Founded in 1983, PON includes faculty, graduate students, and staff from Harvard University, the Massachusetts Institute of Technology and Tufts University, among other schools. The mission of PON is to “develop[] the theory and practice of negotiation, to nurtur[e] the next generation of negotiation teachers and scholars, and to help[] students become

⁶ More information on this course can be found at Harvard Law Today. See Deakin, Michelle. “Designing the Deal.” *Harvard Law Bulletin* (Sept. 1, 2005). <<https://hls.harvard.edu/today/designing-the-deal>> (accessed Feb. 27, 2023); McArdle, Elaine. “Bridging Theory and Practice in Corporate Law.” *Harvard Law Bulletin* (Jan. 24, 2012). <<https://hls.harvard.edu/today/bridging-theory-and-practice-in-corporate-law>> (accessed Feb. 27, 2023).

⁷ See Perkins, Christine. “Subramanian Will Succeed Mnookin as Program on Negotiation Chair.” *Harvard Law Today* (Mar. 15, 2018). <<https://hls.harvard.edu/today/subramanian-will-succeed-mnookin-program-negotiation-chair>> (accessed Mar. 6, 2023).

more effective negotiators.”⁸ Over the past thirty-five years, PON faculty, including myself, have taught tens of thousands of businesspeople around the world how to become more effective negotiators. In particular, I have taught in the *Negotiation & Leadership* program and the PON *Master Class*. PON Global, a program that I spearheaded in 2016, has been taught to more than a thousand executives in ten countries around the world.⁹

9. Since 2013, I have served as a director of LKQ Corporation (NASDAQ: LKQ), a Fortune 500 company in the automotive sector (“LKQ”). LKQ is incorporated in Delaware and has operations throughout the U.S., Canada, and Europe. In 2022, LKQ had approximately \$13 billion in annual revenues, 50,000 employees, and \$15 billion in market capitalization; it is currently #319 on the Fortune 500 list.¹⁰ I am formerly the Chair of the Nominating/Governance Committee and the Lead Independent Director. I currently serve as Chairman of the Board.

⁸ “Welcome to the Program on Negotiation (PON).” *Harvard Program on Negotiation*. <<https://www.pon.harvard.edu/about>> (accessed Mar. 6, 2023).

⁹ See “PON Global.” *Harvard Program on Negotiation* (May 20, 2022). <<https://web.archive.org/web/20220520141129/https://www.pon.harvard.edu/category/pon-global>> (accessed Mar. 13, 2023).

¹⁰ “Fortune 500.” *Fortune* (2023). <<https://fortune.com/ranking/fortune500/2023/search/?Name=lkq>> (accessed June 8, 2023).

10. During my ten years on the LKQ board, the company has made more than a hundred acquisitions. I have been involved in the negotiation and execution of several of the most significant acquisitions, including Sator Beheer for approximately \$268 million (May 2013),¹¹ Rhiag-Inter Auto Parts Italia S.p.A. for €1.0 billion (March 2016),¹² Stahlgruber GmbH for €1.5 billion (May 2018),¹³ and Uni-Select. Inc. for \$2.1 billion (February 2023).¹⁴

11. I am regularly retained as an advisor or expert witness in complex corporate transactions. I also advise individuals, boards of directors, and management

¹¹ Knight, Meribah. “LKQ Acquires Netherlands Auto Parts Distributor for \$268 Million.” *Crain’s Chicago Business* (Apr. 25, 2013). <<https://www.chicagobusiness.com/article/20130425/NEWS05/130429834/lkq-acquires-netherlands-auto-parts-distributor>> (accessed Feb. 27, 2023); “LKQ Corporation Finalizes Acquisition of Sator Beheer.” *GlobeNewswire* (May 1, 2013). <<https://www.globenewswire.com/news-release/2013/05/01/543410/10030936/en/%20LKQ-Corporation-Finalizes-Acquisition-of-Sator-Beheer.html>> (accessed Feb. 27, 2023).

¹² “LKQ Corporation Announces Agreement to Acquire Rhiag-Inter Auto Parts Italia S.p.A.” *GlobeNewswire* (Dec. 22, 2015). <<https://www.globenewswire.com/news-release/2015/12/22/797609/0/en/LKQ-Corporation-Announces-Agreement-to-Acquire-Rhiag-Inter-Auto-Parts-Italia-S-p-A.html>> (accessed Feb. 27, 2023); “LKQ Corporation Finalizes Acquisition of Rhiag-Inter Auto Parts Italia S.p.A.” *GlobeNewswire* (Mar. 21, 2016). <<https://www.globenewswire.com/news-release/2016/03/21/821696/0/en/LKQ-Corporation-Finalizes-Acquisition-of-Rhiag-Inter-Auto-Parts-Italia-S-p-A.html>> (accessed Feb. 27, 2023).

¹³ “LKQ Corporation Announces Agreement to Acquire Stahlgruber GmbH.” *GlobeNewswire* (Dec. 11, 2017). <<https://www.globenewswire.com/news-release/2017/12/11/1250656/0/en/LKQ-Corporation-Announces-Agreement-to-Acquire-Stahlgruber-GmbH.html>> (accessed Feb. 27, 2023); “LKQ Corporation Finalizes Acquisition of Stahlgruber GmbH.” *GlobeNewswire* (May 31, 2018). <<https://www.globenewswire.com/news-release/2018/05/31/1514504/0/en/LKQ-Corporation-Finalizes-Acquisition-of-STAHLGRUBER-GmbH.html>> (accessed Feb. 27, 2023).

¹⁴ “LKQ Corporation Enters into Definitive Agreement to Acquire Uni-Select Inc.” *Uni-Select* (Feb. 27, 2023). <<https://uniselect.com/content/files/LKQ-Corp-Acquisition-of-Uni-Select-Press-Release-Final.pdf>> (accessed Feb. 27, 2023).

teams on issues of deal-making and corporate governance, and I have participated in several significant transactions as a member of the LKQ board of directors. Over the past fifteen years, I have been involved as an advisor, expert witness, or corporate director in deals or situations worth over \$150 billion in aggregate value.

12. I have testified as an expert witness approximately twenty times at trial or arbitration hearing, and numerous times by deposition, for both plaintiffs and defendants, in disputes concerning corporate transactions, deal process design, corporate governance, and M&A, and have never been disqualified as an expert in these fields. My Curriculum Vitae, which includes a complete listing of my academic publications and expert witness testimony over the past five years, is attached as **Appendix A: Curriculum Vitae**.

B. Statement of Assignment

13. On August 31, 2022, Arm Ltd. (“Arm”), a provider of microprocessor intellectual property (“IP”) for use in semiconductor chips and other electronic devices, filed a complaint against Qualcomm Inc., Qualcomm Technologies, Inc. (collectively, “Qualcomm”), and Nuvia, Inc. (“Nuvia”) asking for specific

performance of termination provisions contained in licenses entered into by Nuvia and Arm.¹⁵

14. The complaint rests upon licenses that Arm negotiated with Nuvia in 2019 permitting Nuvia to license Arm's architecture to build custom processor cores.¹⁶ Qualcomm acquired Nuvia in 2021.¹⁷
15. I have been retained by Arm, through its counsel Morrison & Foerster LLP, to answer the following questions:

- 1) What principles of negotiation theory and transactional practice are relevant in assessing the initial negotiation of the licensing agreements negotiated between Arm and Nuvia?
- 2) What principles of negotiation theory and transactional practice are relevant in assessing Qualcomm's acquisition of Nuvia?
- 3) What principles of negotiation theory and transactional practice are relevant for assessing the [REDACTED] in the Arm-Nuvia ALA?
- 4) Is it possible to predict the outcome of a hypothetical successful negotiation between Qualcomm and Arm over a transfer of Nuvia's ALAs to Qualcomm?

¹⁵ Complaint. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Aug. 31, 2022) ("Complaint") ¶¶ 1-3.

¹⁶ *Id.* ¶¶ 20-22.

¹⁷ "Qualcomm to Acquire NUVIA." *Qualcomm* (Jan. 12, 2021). <<https://www.qualcomm.com/news/releases/2021/01/qualcomm-acquire-nuvia>> (accessed Sept. 12, 2023).

16. A complete list of the documents and data that I rely upon in reaching my conclusions in this matter is provided in **Appendix B: Materials Considered**.
17. The current hourly rate for my work is \$1,950. My compensation is not affected by my findings or the outcome of this litigation. I supervised and directed a team at Vega Economics to assist me in this assignment, and I receive further compensation based on their billings. Their compensation is not affected by my findings or the outcome of this litigation.
18. I hold the opinions stated in this report with a reasonable degree of professional certainty. I reserve the right to amend or supplement my opinions and report, if appropriate, based on any additional discovery, or in response to opinions or reports of other experts in this matter.

C. Summary of Opinions

19. Based on my review of the record, my experience, and my professional judgment, I conclude that:
 - 1) Arm entered into a limited number of ALA contracts, and each was negotiated separately. Consistent with negotiation principles, Arm negotiated different provisions with Nuvia and Qualcomm.
 - 2) Due diligence in an M&A transaction typically involves an examination of license agreements. Consistent with norms in transactional practice, Qualcomm and Nuvia seemed to be aware of the [REDACTED] in the ALAs.

- 3) Consistent with the business objectives of CIC provisions and negotiation principles, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- 4) As a matter of negotiation theory, it is not feasible to predict with great precision the outcome of a hypothetical successful negotiation between Qualcomm and Arm over a transfer of Nuvia's ALAs to Qualcomm. This means that contractual terms that were considered during the parties' previous negotiations cannot simply be adopted later in order to make the parties whole. This is especially true now that Qualcomm's conduct and the resulting publicity of this lawsuit means that there must be a consideration of harm to Arm, not just the benefit to Qualcomm from the Nuvia ALA transfer.

20. My full conclusions are contained in the body of this report.

II. SUMMARY OF RELEVANT FACTS

21. I assume the following facts to be true for purposes of my analysis. To my knowledge, these facts are uncontested between the parties.
22. Arm is a developer of IP related to microprocessor architectures and designs.¹⁸ A microprocessor architecture “defines behavior that is common to many processor designs,” while the processor itself “is an implementation of an architecture, and can be integrated into several different designs.”¹⁹ Arm

¹⁸ “The ARM Processor Business Model.” *Arm.* <<https://developer.arm.com/documentation/dht0001/a/architectures--processors--and-devices/the-arm-processor-business-model>> (accessed Sept. 12, 2023).

¹⁹ *Id.*

processor designs and architectures are integrated into silicon semiconductor chips, system-on-chip devices, or other specialized computing platforms.²⁰

Instead of manufacturing chips itself, Arm licenses its processor technology to companies making chips or other electronic devices.²¹

23. Arm was founded in 1990 and has spent decades developing its leading processor technology.²² Approximately 80 percent of Arm's employees are focused on research and design of Arm's technology.²³ Arm's processor designs and architectures are used by leading companies across the globe, including AMD, Intel, MediaTek, Nvidia, Samsung, and others.²⁴

24. Arm makes money from licensing its IP to partner companies, both by collecting an upfront license fee and a royalty based on the selling price of the chip.²⁵ In pursuit of this goal of monetizing its IP, Arm provides support to

²⁰ *Id.*; “Licensing Arm Technology: Access for Everyone.” *Arm.* <<https://www.arm.com/products/licensing>> (accessed Sept. 12, 2023).

²¹ “The ARM Processor Business Model.” *Arm.* <<https://developer.arm.com/documentation/dht0001/a/architectures--processors--and-devices/the-arm-processor-business-model>> (accessed Sept. 12, 2023).

²² Arm Holdings plc. *Amendment No. 2 to Form F-1 Registration Statement* (Sept. 5, 2023). <<https://www.sec.gov/Archives/edgar/data/1973239/000119312523228059/d393891df1a.htm>> (accessed Dec. 14, 2023) (“Arm Registration Statement”) at 3.

²³ *Id.* at 2.

²⁴ *Id.* at 1.

²⁵ Abbey, Will. Deposition (Oct. 27, 2023) (“Abbey Dep.”) 72:13-73:12, 100:2-102:19; Shimpi, Anand Lal. “The ARM Diaries, Part 1: How ARM’s Business Model Works.” *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works>> (accessed Sept. 12, 2023).

companies developing technology based on Arm-designed components or architectures.²⁶ Arm also negotiates license agreements with each customer that seeks to implement its technology.²⁷

25. Arm may enter into different types of license agreements with its customers based on how the licensee intends to use Arm technology.²⁸ One common contractual licensing agreement Arm uses is the Technology License Agreement (“TLA”), [REDACTED]

[REDACTED].²⁹ Architecture License Agreements (“ALAs”), on the other hand, [REDACTED]

²⁶ Abbey Dep. 33:15-34:24; “Licensing Arm Technology: Access for Everyone.” *Arm.* <<https://www.arm.com/products/licensing>> (accessed Sept. 12, 2023) [REDACTED] [REDACTED]

[REDACTED]; Shimpi, Anand Lal. “The ARM Diaries, Part 1: How ARM’s Business Model Works.” *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works/2>> (accessed Sept. 12, 2023) ([REDACTED])

²⁷ Shimpi, Anand Lal. “The ARM Diaries, Part 1: How ARM’s Business Model Works.” *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works>> (accessed Sept. 12, 2023) (“[REDACTED] [REDACTED] [REDACTED] .”). See also Abbey Dep. 69:8-19.

²⁸ Arm Registration Statement at 87; Abbey Dep. 75:12-77:18; Grisenthwaite, Richard. Deposition (Nov. 15, 2023) 24:1-25:4; Shimpi, Anand Lal. “The ARM Diaries, Part 1: How ARM’s Business Model Works.” *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works>> (accessed Sept. 12, 2023) [REDACTED] [REDACTED] [REDACTED].”).

²⁹ Segars, Simon. Deposition (Nov. 16, 2023) (“Segars Dep.”) 29:23-30:21; Abbey Dep 75:12-24.

[REDACTED].³⁰ The vast majority of Arm's agreements are TLAs, with Arm granting very few ALAs to date.³¹ Companies that have negotiated ALAs with Arm [REDACTED]

[REDACTED]
[REDACTED].³²

26. Because Arm's business model relies on monetizing its research and the resulting IP, the specific licenses governing allowed usage and agreed compensation for Arm's technology are extremely important to the company.³³

³⁰ Segars Dep. 30:12-32:12; Abbey Dep. 76:11-77:20.

³¹ Arm Registration Statement at 88 ("Historically, most customers licensed our products under the terms of a TLA."), 133 ("A very small number of companies want to design customized Arm CPUs for their next-generation chips. For these companies, we can provide an architecture license which allows the licensee to develop their own CPU design that is compliant with the Arm ISA."); Shimpi, Anand Lal. "The ARM Diaries, Part 1: How ARM's Business Model Works." *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works>> (accessed Sept. 12, 2023) ("In terms of numbers, ARM has around 1000 licenses in the market spread across 320 licensees/partners. Of those 320 licensees, only 15 of them have architecture licenses."). *See also* Segars Dep. 31:2-4.

³² Segars Dep. 31:15-24, 42:24-44:19; Williamson, Paul. Deposition (Nov. 9, 2023) ("Williamson Dep.") 21:10-23:18.

³³ Williamson Dep. 244:17-19 ("ARM's business is fundamentally defined by our ability to protect and license our technology."); Arm Registration Statement at 87 ("We generate the majority of our revenue from customers who enter into license agreements, pursuant to which we receive royalty fees based on average selling price of the customer's Arm-based chip or a fixed fee per chip. Royalty revenues are impacted primarily by the adoption of our products by the licensee as well as other factors, such as product lifecycles, customer's business performance, market trends and global supply constraints. In the fiscal year ended March 31, 2023, royalty revenue represented 63% of our total revenue.").

Arm's licenses, and its ALAs in particular, carefully and specifically designate the technology that can be used by the customer to develop its processor cores.³⁴

27. Nuvia, a chip maker founded by ex-Apple and Google engineers, obtained both an Arm ALA and an Arm TLA in 2019 and began developing the Phoenix core, a custom central processing unit ("CPU") core based on the Arm architecture.³⁵ These license agreements that Arm negotiated with Nuvia [REDACTED]

[REDACTED]

[REDACTED].³⁶ [REDACTED]

[REDACTED]

28. The negotiations between Nuvia and Arm over Nuvia's licensing agreements proceeded as follows:

³⁴ Complaint ¶ 19; Arm Registration Statement at 87 ("Under an ALA, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].").

³⁵ Tyson, Mark. "Nuvia 'Clean-Sheet CPU Design' Performance Previewed." *Hexus* (Aug. 11, 2020). <<https://hexus.net/tech/news/cpu/144733-nuvia-clean-sheet-cpu-design-performance-reviewed>> (accessed Sept. 12, 2023); Gulati, Manu. 30(b)(1) Deposition (Oct. 12, 2023) ("Gulati Dep.") 40:19-46:18.

³⁶ Segars Dep. 113:24-115:17 (discussing how the royalty rates under Nuvia's and Qualcomm's ALAs differed and stating that [REDACTED]
[REDACTED]

³⁷ [REDACTED] See also Segars Dep. 82:12-21,
105:1-106:21.





[REDACTED]

29. In January of 2021, Qualcomm acquired Nuvia and indicated that it planned to integrate Nuvia's CPU designs into Qualcomm products.⁵² However, neither Nuvia nor Qualcomm provided notice of the acquisition to Arm, and neither obtained Arm's consent to transfer or assign Nuvia's licenses to Qualcomm, in alleged breach [REDACTED].⁵³

III. NEGOTIATION THEORY AND APPLICATION TO LICENSING AGREEMENTS

A. Core Negotiation Terminology: BATNA, ZOPA, and Reservation Value

30. The best alternative to a negotiated agreement ("BATNA") for both sides determines the bargaining range for any negotiation.⁵⁴ In a price negotiation,

[REDACTED]

⁵³ Complaint ¶ 28.

⁵⁴ Subramanian, Guhan. *Dealmaking: The New Strategy of Negotiations*, 2nd edition. New York: W. W. Norton & Company (2020) ("Dealmaking") at 6-7.

the BATNAs can often be quantified to yield a “reservation value,” that is, the minimum-willingness-to-take for a seller, or a maximum-willingness-to-pay for a buyer.⁵⁵ Given the BATNAs and reservation values, effective negotiators will then usually have at least a first-pass assessment, before they engage in negotiations, as to whether a zone of possible agreement (“ZOPA”) exists.⁵⁶

31. In my forthcoming book *Deals: The Economic Structure of Business Transactions*, my co-author and I offer a simple example of these concepts involving the sale of a used car, in which the BATNA for the seller (Sarah) is to sell the car to a dealership for \$6,900, plus the option value for a better deal before the sale to the dealership (translating into a reservation price of \$8,000 for the sale of her car); and the BATNA for the buyer (Jim) is to buy a newer car with lower mileage for \$11,500 (translating into a reservation price of \$9,000 for his purchase of Sarah’s car). The analysis continues as follows:

Sarah is willing to accept as little as \$8,000, and Jim is willing to pay as much as \$9,000. So ... using the vocabulary of negotiations theory, there is a *zone of possible agreement*, or ZOPA between \$8,000 and \$9,000. In economics this is called the contract zone. If Sarah and Jim arrive at a price in that zone, they will be collectively better off by \$1,000, compared to the

⁵⁵ *Id.* at 8.

⁵⁶ *Id.* at 9-10.

status quo of no deal, as of the time they are negotiating. The deal would create \$1,000 in *joint value*.⁵⁷

32. Our book continues with the point that simply because there is a ZOPA (and even if the parties are both aware that there is a ZOPA), there is no guarantee that the parties will reach a deal. The reason is that each side will use tactics (such as anchoring, bluffing, and posturing) in an effort to extract more of the ZOPA; but by doing so they risk no deal at all. We illustrate this point by returning to the used car negotiation:

Because Sarah wants the highest price she can get, and Jim wants the lowest price, their attempts at strategic bargaining may result in no deal. Even if they reach a point at which they are negotiating in the range between \$8,000 and \$9,000, there is no guarantee that they will settle on a price. Sarah may reject \$8,200, even though it is above her reservation price, because she thinks she can get \$8,500. Or Jim might reject \$8,500, even though it is lower than his reservation price, because he thinks he can get the car for \$8,200. The two may give up and take their alternative deals without realizing they have a potential deal.⁵⁸

33. This simple example illustrates a few core points from basic negotiation theory. First, the joint value created in any negotiation is a function of the parties' BATNAs. Therefore, the joint value created in a negotiation between Sarah and Jim is different from a negotiation between Sarah and (say) Bob, because Bob's

⁵⁷ Klausner, Michael and Guhan Subramanian. *Deals: The Economic Structure of Business Transactions*. Page Proofs. Harvard University Press, forthcoming ("Deals") at 7-8.

⁵⁸ *Id.* at 9.

BATNA would be different from Jim's. Second, because the joint value is different, the outcome is likely to be different based on the counterparty. Specifically, Sarah will make offers and counteroffers based on her assessment of Jim or Bob's willingness-to-pay, which will be based on her assessment of their (different) BATNAs. Third, because of these dynamics, negotiation theory cannot predict with any great confidence where in the ZOPA the deal will end up. And fourth, the ZOPA can change if BATNAs change. Specifically, a ZOPA that may have existed at some point in time previously may not necessarily exist today, particularly where the conditions and factors impacting the ZOPA have changed considerably.

B. Single-Issue vs. Multi-Issue Negotiations

34. The field of negotiation initially focused on developing the theory and practice of pure price negotiations.⁵⁹ These negotiations were “fixed pie” because more for one side necessarily meant an equal amount less for the other side. The Nash bargaining model, which I have applied in my own research on M&A,⁶⁰ predicts that the parties each get half (~50 percent) of the ZOPA in these pure

⁵⁹ See, e.g., Karrass, Chester L. *Give and Take: The Complete Guide to Negotiating Strategies and Tactics*. United States: Crowell (1974).

⁶⁰ Subramanian, Guhan. “Bargaining in the Shadow of Takeover Defenses.” *Yale Law Journal* 113.3 (2003): 621-686.

price negotiations.⁶¹ Assuming common knowledge and a \$100 ZOPA, I explain this model as follows:

In a Nash bargaining game, two players each request a certain amount of the surplus (here, \$100). If their requests are compatible (i.e., summing to $\leq \$100$), each player receives the amount requested; if their requests are not compatible (i.e., summing to $> \$100$), each player receives nothing. Assuming Pareto optimality, independent[ce] of irrelevant alternatives, symmetry, and invariance to positive linear transformations, the Nash bargaining game solution is that each player demands half of the surplus.⁶²

35. Therefore, with no other information about the negotiation other than the magnitude of the ZOPA, a useful first approximation is that each side obtains half of the ZOPA in a fixed-pie negotiation.⁶³

36. However, many real-world negotiations involve multiple issues, not just price. The field of negotiations has accordingly developed to study these more complicated negotiations as well.⁶⁴ The presence of multiple issues in the negotiation allows negotiators to make trades across issues – specifically,

⁶¹ See Nash, John. "Two-Person Cooperative Games." *Econometrica* 21.1 (1953): 128-140.

⁶² Subramanian, Guhan. "Bargaining in the Shadow of Takeover Defenses." *Yale Law Journal* 113.3 (2003): 621-686 at 643 n. 105.

⁶³ Professor Barry Nalebuff (Yale School of Management) has advocated for the same split-the-ZOPA-evenly approach as a normative matter. Nalebuff, Barry. *Split the Pie: A Radical New Way to Negotiate*. Harper Business (2022).

⁶⁴ See, e.g., Raiffa, Howard. *The Art and Science of Negotiation*. Cambridge, Massachusetts: The Belknap Press of Harvard University Press (1982) at 131-132; Lax, David A. and James K. Sebenius. *The Manager as Negotiator*. New York: The Free Press (1986) at 30-33; Malhotra, Deepak and Max H. Bazerman. *Negotiation Genius*. New York: Bantam Dell (2008) at 50-52; Dealmaking at 22-26.

giving what is cheap to give, in exchange for receiving what is valuable to receive. For this reason, multi-issue negotiations create the possibility for value creation, or so-called “win win” negotiations. This stands in contrast to pure price negotiations, which are fixed-pie negotiations or sometimes called “win lose.”

37. This distinction between fixed-pie and value-creating negotiations is well-established in the negotiation literature. While specific prescriptions among negotiation experts vary somewhat, there is general consensus around the idea that effective negotiators try to maximize the overall value of the deal and also capture an appropriate share for their side.

38. Visually, a pure price negotiation can be depicted by a straight line, with the reservation prices for each side demarcating the ZOPA as shown in **Figure 1: Pure Price Negotiation.**

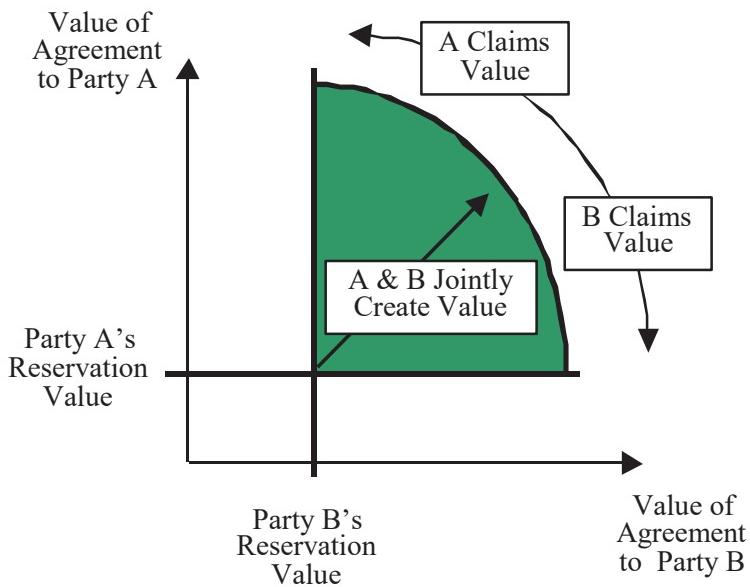
Figure 1: Pure Price Negotiation



39. In contrast, because of the possibility that both sides can be better off from trades, a multi-issue negotiation can only be depicted in a two-dimensional

way. In my teaching, for example, I often use the following diagram to depict the possible outcomes in a multi-issue negotiation. *See Figure 2: Multi-issue Negotiation.*

Figure 2: Multi-issue Negotiation



40. As shown in this diagram, the ZOPA in a multi-issue negotiation is no longer points along a line, but rather the entire shaded area. This means that the ability to predict the outcome is even more difficult in a multi-issue negotiation than in a single-issue (price) negotiation. While classical economic models of bargaining provide some traction in a price negotiation, these models do not readily translate to the multi-issue context. I provide implications of this point

for a hypothetical re-negotiation of the ALA between Arm and Qualcomm in Part VI below.

C. The Value Creation Role of [REDACTED]

41. [REDACTED] commonly used in many different contexts; licensing agreements, supply agreements, credit agreements, and employment agreements are just a few examples. [REDACTED]

[REDACTED]. In general, the business purpose is to provide a licensor with control over the manner and terms in which it does business with a counterparty.⁶⁵ For example, a licensing agreement will typically give the licensor the right to exit the agreement if the licensee

[REDACTED].⁶⁶ The basic idea is that a licensor should not be forced to provide a license to a future third party, for example, to a competitor, or expand the scope of an existing license to an existing counterparty, against its will or on terms that it does not agree with for that particular party. [REDACTED]

⁶⁵ “Dear Negotiation Coach: Coping with a Change-of-Control Provision.” *Harvard Program on Negotiation* (July 31, 2023). <<https://www.pon.harvard.edu/daily/business-negotiations/dear-negotiation-coach-coping-with-a-change-of-control-provision-nb>> (accessed Sept. 19, 2023) (“[REDACTED], as they allow a party to avoid being forced to work with someone other than its agreed-upon counterpart.”).

⁶⁶ See, e.g., Centocor/Schering-Plough Distribution Agreement (Apr. 3, 1998) § 8.2 (c), attached to Schering Plough Corp. *Form 10-K* (Feb. 26, 2004) (“Change in Control. If either party is acquired by a third party or otherwise comes under Control (as defined in Section 1.4 above) of a third party, it will promptly notify the other party not subject to such change of control. The party not subject to such change of control will have the right, however not later than thirty (30) days from such notification, to notify in writing the party subject to the change of Control of the termination of the Agreement taking effect immediately.”).

does not necessarily mean that the license will not continue; but it gives the licensor the right to re-negotiate the terms on which the license will be given.

42. [REDACTED] are a common way to protect against situations where an acquisition of a licensee would (1) dramatically change the scope of rights or obligations between the licensor and licensee, or (2) potentially be used by the acquiring company to bypass the licensor's licensing framework and gain access to licensed technology by acquiring the licensee.

43. By limiting the risk for contracting parties in ways that are relatively cheap to give and valuable to receive, [REDACTED] can benefit both sides – a classic “win win” as described in the prior Part. For example, most credit agreements specify that the debt becomes due if there is a change in control of the borrower. This is because the creditor is granting credit to this specific borrower – and if the borrower subsequently becomes controlled by some other entity, the creditor’s risk of default may increase. Research shows that the cost of capital is lower when there is a [REDACTED] in a credit agreement.⁶⁷ The intuition for

⁶⁷ See, e.g., Crabbe, Leland. “Event Risk: An Analysis of Losses to Bondholders and ‘Super Poison Put’ Bond Covenants.” *The Journal of Finance* 46.2 (1991): 689-706 at 689, 690 (finding that issuers received a 24 to 32 basis point discount when including a CIC control provision); Griffith, Sean J. and Natalia Reisel. “Dead Hand Proxy Puts and Shareholder Value.” *University of Chicago Law Review* 84.3 (2017): 1027-89 at 1056 (“We find that inclusion of a Dead Hand Proxy Put reduces firms’ borrowing costs in a manner that is both statistically and economically significant.”).

this finding is that the creditor perceives less risk, and therefore can offer a lower cost of debt, because the [REDACTED] eliminates the possibility of having to extend credit to a future, higher risk, successor in interest to the borrower. In this way a [REDACTED] is a “win-win” between the parties.

44. When a [REDACTED] is a defined term, the parties will typically enumerate the events that trigger a [REDACTED]. Five types of events are often included in the definition of what constitutes a [REDACTED]

- 1) [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED].

45. These triggers make conceptual sense because they capture the business purpose of a [REDACTED], namely, to protect the parties against doing business with a counterparty against their will or on terms that they have not agreed to. Triggering the [REDACTED] may not necessarily mean that the

parties will terminate their agreement; but it forces a re-negotiation of the terms on which the parties will continue.

46. In some cases, the [REDACTED] contemplates this re-negotiation, and requires that the grantor cannot “unreasonably withhold” consent for the contract or license rights to be transferred. When this language exists, it weakens the grantor’s ability to extract concessions in exchange for transferring the rights to the new owner. Other [REDACTED] do not constrain the grantor’s consent obligation in this way. When the “unreasonably withheld” language is absent, the grantor has a stronger hand in the re-negotiation with the new owner.

D. The Business Role of [REDACTED] in IP Licensing Agreements

47. [REDACTED] are particularly common, if not ubiquitous, in IP licensing agreements. Licensors need to protect their IP as it represents their source of revenue, and uncontrolled usage is likely to dilute or reduce additional revenue sources. [REDACTED] and anti-assignment provisions allow licensors to control if and how their IP is used by companies with whom the licensor did not originally negotiate. Without such provisions, an agreement originally negotiated with one company may end up allowing an entity to use the licensor’s IP without negotiating its own contract terms. In an acquisition scenario, the acquiring company may also be much larger than the original licensee and seek to use the IP on a larger scale and in a different manner than

was originally bargained for. These mismatches between the original negotiating context and the ultimate use create inefficiency; in general, a deal that does not accurately reflect the desires of both parties who are bound to it will not maximize the total surplus that could be claimed between the parties.

48. To effectuate the [REDACTED], licensors may include an option for contract termination, and/or a contract may have a general termination provision conditioned upon certain triggers such as a breach of terms by the other party.⁶⁸

[REDACTED]
[REDACTED].⁶⁹ Writing in an option for contract termination allows the licensor in a licensing agreement to have a “no deal” alternative should negotiation with a new acquiring entity fail. Without this BATNA, the licensor will have no credible walk away option and the prospective licensee, knowing this fact, may extract all of the value from any renegotiation, or refuse to negotiate entirely.⁷⁰

⁶⁸ See, e.g., “Termination Clauses.” LexisNexis. <<https://www.lexisnexis.com/supp/largelaw/no-index/coronavirus/commercial-transactions/commercial-transactions-termination-clauses.pdf>> (accessed Sept. 11, 2023) (giving examples of differently conditioned termination clauses, including upon change of control).

⁶⁹ Deals at 113 (“From the narrow perspective of one party, there is often value in having an unconditional right to terminate when a deal is no longer beneficial. In a long-term supply contract, for example, a buyer may want freedom to stop making purchases if it no longer needs what is being supplied, or if it finds a better deal elsewhere.”).

⁷⁰ Dealmaking at 165-67 (explaining how, to execute a “shut-down move” in a negotiation, such as threatening to terminate a contract if an offer or term is not accepted, the threat must be

49. It also may make sense, from a business perspective, [REDACTED]

[REDACTED]

[REDACTED]

. Without such a clause, the licensor risks the licensee continuing to use the derivative work to further future R&D efforts (on an unlicensed basis), despite that work being (definitionally) the originally licensed IP. The licensee would essentially be permitted free use of the licensor's technology: the licensee would get the core technology under the original license, build a derivative, and then pay no royalties on the derivative. An entity that subsequently acquires the licensee and its derivative technology would then be able to extract the value that the licensor would have gained through the derivative. IP negotiations thus need to address the use of derivative work based on the licensor's IP to avoid such a scenario where entities could constantly change royalty rates through acquisitions of licensees conducted with the licensor's consent. Such a provision covering derivative work, while undeniably favorable to the licensor, nonetheless reflects an intentional outcome of the negotiation process based on important business objectives.

"credible"), 24 ("If we are fully forthcoming about our interests, the other side can use this information to extract all of the value that is created. ... The core of the problem is this: in order to identify value-creation opportunities in a negotiation we need to disclose information; but disclosing information can expose us to value-claiming tactics by the other side.").

50. A [REDACTED]
[REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]. If the licensor allowed a licensee to breach its license agreement without imposing consequences for such a breach, other licensees may engage in similar behavior or attempt to use the licensee's breach (and lack of consequences) to negotiate for more favorable terms.

IV. APPLICATION TO ARM-NUVIA ALA

A. Arm Entered into a Limited Number of ALA Contracts and Each Was Separately Negotiated.

51. Most of Arm's licensing agreements are TLAs, not ALAs.⁷¹ [REDACTED]
[REDACTED]
[REDACTED].⁷³

The significant support required from Arm for ALA licensees' development efforts and the fact that most companies do not have the capabilities to design custom CPUs and instead buy off-the-shelf CPUs (available from Arm and

⁷¹ Segars Dep. 31:2-4.

⁷² Manners, David. "ARM Adds an Architectural Licensee." *Electronics Weekly* (Apr. 21, 2015). <<https://www.electronicsweekly.com/news/business/finance/arm-adds-architectural-licensee-2015-04>> (accessed Sept. 11, 2023).

⁷³ Complaint ¶ 14.

other chip design companies) contribute to the relative infrequency of these types of agreements.⁷⁴

52. Because of the significant investment that each of these handful of ALA deals requires from Arm and its licensees, the ALA terms are subject to careful review and negotiation. As a matter of custom in transactional practice, internal specialists in the underlying technology, assisted by inside and outside counsel, would carefully review the ALAs. Indeed, even if the licensee chose not to deviate from initial terms proposed by Arm at the onset of the negotiations, it is standard business practice for all contracts, especially such high profile and customized ones, to be carefully reviewed to ensure that they reflect the full and accurate business intentions of the parties.⁷⁵ There are additionally legitimate business reasons to expect that Arm's ALAs were subject to individualized negotiations, including the relative infrequency with which they were entered into and the highly customized nature of the work that each would

⁷⁴ Segars Dep. 43:10-44:19, 51:16-52:24, 191:2-193:18. *See also* Complaint ¶ 18.

⁷⁵ An Arm representative also testified to this effect. Herbert, Tim. Deposition (Oct. 25, 2023) ("Herbert Dep.") 54:25-57:8 (describing how Arm had [REDACTED] and testifying, "[REDACTED]. So they've come up with [REDACTED]. Q. In your experience, do [REDACTED]? [sic] ... THE WITNESS: [REDACTED]).

encompass, in contrast to a TLA that might provide for simple incorporation of an “off-the-shelf” Arm design.⁷⁶

53. Given this expectation, under reasonable business custom and practice, [REDACTED]
[REDACTED]
[REDACTED], would have represented the negotiated intentions of both
of both licensor and licensee. Given the timeline of negotiating Nuvia's ALA
discussed in Part II above, I conclude that, under reasonable business custom
and practice, [REDACTED].
[REDACTED].

⁷⁶ Abbey Dep. 75:22-76:4; Complaint ¶ 17.

77

55. According to business custom and practice, the inclusion of such a specific and clear provision would not have been accidental, particularly in light of the extensive editing and redlining and multiple meetings involved in the negotiation process.⁷⁸ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

56. Further, my analysis of the Qualcomm ALA alongside Nuvia's ALA, which will be discussed in the next section, shows that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

57. Importantly, [REDACTED]

[REDACTED]

[REDACTED]

⁷⁸ Herbert Dep. 119:18-212:12 (testifying that Nuvia proposed about fifteen rounds of edits to the ALA, that he met with Nuvia in person about ten times to discuss the ALA and may have had additional phone conversations, and that the negotiation process took six months); [REDACTED]

B. Arm Negotiated Different Provisions with Nuvia and Qualcomm.

58. I analyzed the terms of both the Qualcomm and the Nuvia ALAs and their appendices and found that, in terms of economics and negotiations, they reflect the different business objectives of Qualcomm and Nuvia.

59. While much of the language appears similar, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] ■ [REDACTED]

79 [REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED] [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
60. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
61. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED] [REDACTED]
- [REDACTED]

80 [REDACTED]

81 [REDACTED]

82 [REDACTED]

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62. [REDACTED]

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84

63. The uniqueness of these contracts, as well as their individualized provisions, indicates that each was the product of negotiations between the parties and Arm, and as such, each reflects the deliberate intentions and expectations of Qualcomm or Nuvia, respectively. Testimony taken from parties involved in negotiations also confirms this. [REDACTED]

ANSWER The answer is (A). The first two digits of the number 1234567890 are 12.

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Term	Percentage
GMOs	~75%
Organic	~85%
Natural	~88%
Artificial	~78%
Organic	~85%
Natural	~88%
Artificial	~78%
Organic	~85%
Natural	~88%
Artificial	~78%

89

Herbert Dep. 185:9-13 (“Q. Did the fact that NUVIA was a start-up play a role in deciding how the payment [to ARM] would be structured in this case? A. Yes, because they were very cash constrained.”).

64. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

65. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]

⁹¹ Herbert Dep. 318:7-18 (reading from a document discussing “Nuvia/Qualcomm Plans” that “[REDACTED] because they had a limited scope, if Qualcomm wants to expand the usage to other markets, we expect to be renumerated.”); Williamson Dep. 38:23-39:24 (testifying that Qualcomm’s acquisition of Nuvia “could result in the core being deployed in any number of markets” including those beyond the originally anticipated market of cloud server designs), 62:24-63:24 (testifying that the Qualcomm ALA was agreed to in 2013 and that by 2021 [when Nuvia was acquired], it was “a very different time in the relationship and market”).

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

66. These differences are entirely consistent with the negotiation theory described in Part III. Negotiators will adjust their negotiation tactics and strategy based on the perceived BATNA of the counterparty. For example, a licensee that

intends to use Arm's technology for a more lucrative market may justify more favorable terms compared to a licensee who is pursuing a more commoditized, lower margin market. In this case, it is highly likely, in my opinion, that Arm perceived a different BATNA for each of Nuvia and Qualcomm, which in turn would yield a different ZOPA in the two different negotiations, which then (as summarized in Table 1) yields different ALAs.

V. APPLICATION TO QUALCOMM'S ACQUISITION OF NUVIA

A. Due Diligence Typically Involves an Examination of License Agreements.

67. As a matter of standard transactional practice, Qualcomm reasonably should have been aware of the [REDACTED] when it agreed to acquire Nuvia. As I described in Part III.C above, [REDACTED] [REDACTED] are common in corporate contracts. As a large and sophisticated enterprise with extensive experience with IP licensing and contract negotiation, including with Arm,⁹² Qualcomm should have reasonably known of the possibility of such provisions existing in Nuvia's contracts, and of their resulting implications.

⁹² Complaint ¶ 26.

68. Consistent with this conclusion, I analyzed a collection of Arm ALAs provided to me in this matter and found that: (i) each contract reflected a unique agreement, but (ii) CIC or anti-assignment provisions were a standard inclusion across the contracts. For example, Arm's [REDACTED] states:

[REDACTED]
[REDACTED]

69. Similarly, the ALA between [REDACTED] Inc. includes

[REDACTED] that require Arm's [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] ⁹⁴ The results of my

⁹³ Architecture License Agreement Between [REDACTED] [REDACTED] (Oct. 16, 2012) (ARM_01246043 at ARM_01246059).

⁹⁴ Technology License Agreement Between [REDACTED] (AMD) (Oct. 31, 2013) (ARM_01245673 at ARM_01245693-94).

review of these and other contracts reflect the reality that such provisions are commonplace protective measures that may be negotiated for in IP licensing agreements.⁹⁵

70. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] As a matter of standard corporate practice, an important component of the due diligence process is to analyze the target company's contracts and agreements, especially those pertaining to IP, for any relevant provisions that could impact their transferability in a merger or acquisition.⁹⁷ Similarly, once

⁹⁵ For additional examples of Arm ALA and TLA provisions dealing with license assignment or changes in control, see [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] June 30, 2021) (ARM_01245727 at ARM_01245751).

96 [REDACTED]

[REDACTED]

⁹⁷ Robins, Martin B. "Intellectual Property and Information Technology Due Diligence in Mergers and Acquisitions: A More Substantive Approach Needed." *Journal of Law, Technology and Policy* (2008): 321-356 at 328-29 ("Since M&A transactions and macroeconomic turmoil can have a major impact on the viability of licensors and licensees, it is also prudent to address the termination provisions of any major license agreements to which

aware,

71. Similarly, my review of Arm's ALAs found that [REDACTED] were commonplace, and generally involved the requirement that the licensee

the target is a party to determine what circumstances allow for termination. For example, if there is a “change of control” of the licensor, or if the licensor’s circumstances drastically deteriorate, or merely for the licensor’s own convenience.”); Börzsönyi, Blanka. “Intellectual Property Considerations in M&A Due Diligence.” *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae* 58 (2019): 89-99 at 96 (“Counsel must also understand how the Target IP has been developed or acquired[.] … In the case of acquired IP, the assignment provisions of the relevant agreements must be double-checked to ensure that the transfer of ownership has been completed, without any additional conditions or obligations. A core area of review is the IP [licenses] concluded by the Company[.] … IP counsel should normally try to identify… any post-termination restrictions; … e.g., in the case of stock purchases and forward or reverse mergers change-of-control or anti-assignment provisions may be triggered[.]”).

98

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ■ or substantially similar language.¹⁰⁰ It is reasonable for Arm to have negotiated for such a protection to prevent unauthorized and unsupervised use of its IP, and Qualcomm's due diligence and acquisition bidding should have incorporated the possibility that Arm

99

100

[REDACTED] Technology License Agreement Between Arm Limited and [REDACTED] Inc. (AMD) (Oct. 31, 2013) (ARM_01245673 at ARM_01245690) ("[REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]"); Architecture License Agreement Between Arm Limited and [REDACTED] (Oct. 16, 2012) (ARM_01246043 at ARM_01246058) [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED] Architecture License Agreement Between Arm Limited and [REDACTED] (Nov. 5, 2009) (ARM_01246021 at ARM_01246033) ([REDACTED])

[REDACTED]; Technology License Agreement Between Arm Limited and [REDACTED] (Mar. 30, 2005) (ARM_01240449 at ARM_01240461); Technology License Agreement Between Arm Limited and [REDACTED] (Oct. 17, 2014) (ARM_01246135 at ARM_01246147-48); Second Amended and Restated Technology License Agreement Between Arm Limited and [REDACTED] (Oct. 17, 2016) (ARM_01245979 at ARM_01245993-94); Amended and Restated Architecture License Agreement Between Arm Limited and [REDACTED] (Mar. 23, 2017) (ARM_01245794 at ARM_01245805); Architecture License Agreement Between Arm Limited and [REDACTED] (Feb. 3, 2018) (ARM_01246067 at ARM_01246080); Architecture License Agreement Between Arm Limited and [REDACTED] (June 30, 2021) (ARM_01245727 at ARM_01245750).

would trigger the provision if a renegotiated deal over the Nuvia licenses could not be completed.

B. Qualcomm and Nuvia Seemed to be Aware of the

72. Consistent with customary transactional practices and my conclusions in the prior Part, my review of the record indicates [REDACTED]

The image consists of six horizontal black bars of varying lengths. The first four bars are of equal length and are evenly spaced. The fifth bar is significantly longer than the others and is positioned below the fourth bar. The sixth bar is shorter than the fifth and is positioned below it.

Category	Sample Count
1	~100
2	~100
3	~100
4	~100
5	~350
6	~350
7	~350
8	~350
9	~350
10	~350
11	~350
12	~350

73. [REDACTED]

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ANSWER The answer is 1000.

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A horizontal row consisting of seven solid black rectangular blocks of equal width, positioned side-by-side.

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74. [REDACTED]

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[REDACTED]

75. Taken together, Qualcomm's initial communications show that it anticipated needing both Arm's consent as well as potential new agreements, including potentially new annexes, in order to continue developing Nuvia's innovations based on Arm's IP, and that it did not expect Qualcomm's ALA and TLA to

[REDACTED]

[REDACTED]

76. In my opinion, Qualcomm's stated position is consistent with the transfer of rights and assets during acquisitions. It is inconsistent with Qualcomm's assertions elsewhere that the " [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]¹⁰⁸

C. Qualcomm Did Not Negotiate for Nuvia to Obtain Arm's Consent.

77. Qualcomm could have negotiated for contractual commitments that would have reduced its exposure to the [REDACTED] with Arm. However, Qualcomm's acquisition of Nuvia closed without Nuvia obtaining Arm's consent for transfer of Nuvia's ALA. I infer from this that Qualcomm assumed the risk that Arm would not consent for the transfer of the ALA.

¹⁰⁸ Counterclaim ¶ 201.

VI. APPLICATION TO THE [REDACTED] IN THE ARM-NUVIA ALA

A. The [REDACTED] in the Arm-Nuvia ALA Are Consistent with Business Considerations, Negotiation Theory and Case Studies.

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79. Real-world cases support this conclusion. Consider Disney which, on the cusp of launching its streaming service Disney+, elected not to renew its licensing

¹⁰⁹ Deals at 88 (“In some situations, for an exchange to take place between two parties, one or both must make an *asset-specific investment* (or, equivalently, a *relationship-specific investment*). This is an investment whose value is dependent on the cooperation of another party; it would have a substantially lower value, and perhaps no value, outside the relationship with that party.”) (italics in original) (citations omitted).

agreement with Netflix. As a result, Disney content was removed from Netflix and Netflix lost its rights to stream future Disney movies.¹¹⁰

80. *SQL Solutions v. Oracle Corp.* also illustrates this principle.¹¹¹ In this case, D&N Systems Inc. held a perpetual, non-exclusive license from Oracle Corp. to use certain Oracle software. Under the agreement, the rights to D&N were exclusively for its use and were not to be assigned or transferred to a third party without written permission from Oracle. In January 1990, Sybase, an Oracle competitor, bought D&N Systems using a reverse merger structure (i.e., leaving the D&N corporate shell intact). Oracle then withdrew from the licensing agreement with D&N, claiming that a “transfer of rights” occurred when Sybase acquired D&N. Sybase/D&N brought suit seeking injunctive relief, claiming no such transfer of rights took place because the D&N corporate shell remained unchanged. The District Court ruled for Oracle, finding that a “transfer of rights” did take place notwithstanding the reverse merger

¹¹⁰ Robehmed, Natalie. “Disney to End Distribution Agreement with Netflix, Launch Streaming Service.” *Forbes* (Aug. 8, 2017). <<https://www.forbes.com/sites/natalierobehmed/2017/08/08/disney-to-end-distribution-agreement-with-netflix-as-it-prepares-own-streaming-service/?sh=7486af462a98>> (accessed Dec. 14, 2023); Castillo, Michelle. “Disney Will Pull Its Movies from Netflix and Start Its Own Streaming Services.” *CNBC* (Aug. 8, 2017). <<https://www.cnbc.com/2017/08/08/disney-will-pull-its-movies-from-netflix-and-start-its-own-streaming-services.html>> (accessed Dec. 14, 2023).

¹¹¹ *SQL Solutions, Inc. v. Oracle Corp.*, 1991 WL 626458 (N.D. Cal. 1991).

structure.¹¹² I explain to my students that this case illustrates the general point, that “[u]nder basic equitable principles, a company should not be forced, in effect, to license its intellectual property to a competitor.”¹¹³

81. Further, it is reasonable and standard that terminations occur *even if* one party will lose the benefit of its investments or improvements. For example, when Starbucks terminated a licensing agreement with Kraft Foods, Kraft could no longer distribute Starbucks coffee despite Kraft having made significant investment in developing Starbucks’ retail presence for over a decade.¹¹⁴ Indeed, in anticipation of the large loss that Kraft would suffer if Starbucks terminated the license arrangement—and consistent with negotiation principles—Kraft negotiated with Starbucks for a specified buyback process that involved a 35 percent sale premium.¹¹⁵

82. In another case Hewlett-Packard (“HP”) had a licensing partnership with Beats Electronics wherein HP invested to integrate Beats Audio technology into its

¹¹² Subramanian, Guhan and Rhea Ghosh. “Remicade/Simponi: Legal Memorandum.” *HBS Case Study N9-911-046* (July 13, 2012) at 3-4.

¹¹³ *Id.* at 4.

¹¹⁴ Reily, Stephen. “Starbucks, Kraft and the \$2.7 Billion Divorce.” *IMC Licensing* (Dec. 23, 2013). <<https://imclicensing.com/starbucks-kraft-and-the-2-7-billion-divorce>> (accessed Dec. 15, 2023).

¹¹⁵ *Id.*

products, particularly its high-end PCs.¹¹⁶ When Apple, an HP competitor, acquired Beats Electronics, HP was required to phase out its Beats integration plans, despite the previously existing partnership.¹¹⁷ Such consequences are a natural and logical conclusion of [REDACTED] that are needed to make asset-specific investments.¹¹⁸

¹¹⁶ Reardon, Marguerite and Shara Tibken. “The Beats Go On at HP (at Least Until 2015).” *CNET* (May 28, 2014). <[https://www.cnet.com/tech/computing/the-beats-go-on-at-hp-at-least-until-2015>](https://www.cnet.com/tech/computing/the-beats-go-on-at-hp-at-least-until-2015/) (accessed Dec. 15, 2023).

¹¹⁷ *Id.*; Keizer, Gregg. “HP Must Give Up Beats Audio After Apple Deal.” *Computerworld* (May 29, 2014). <[https://www.computerworld.com/article/2489984/hp-must-give-up-beats-audio-after-apple-deal.html>](https://www.computerworld.com/article/2489984/hp-must-give-up-beats-audio-after-apple-deal.html) (accessed Dec. 15, 2023).

¹¹⁸ Numerous other cases support the conclusion that it is reasonable and standard for [REDACTED] to require discontinuance of use even if it results in lost benefit of investments or improvements. For instance, Target had long term licensing agreements with the brands Cherokee, Circo, Mossimo, and Merona, but when those agreements were not renewed, Target not only lost the rights to sell those branded products but gave up all the investments it had made in brand value, promotion, and customer loyalty associated with brands. *See* Ziobro, Paul. “Target Won’t Renew U.S. License for Cherokee Brand.” *The Wall Street Journal* (Sept. 10, 2015). <[https://www.wsj.com/articles/target-wont-renew-u-s-license-for-cherokee-brand-1441919400>](https://www.wsj.com/articles/target-wont-renew-u-s-license-for-cherokee-brand-1441919400) (accessed Dec. 15, 2023); Kumar, Kavita. “Target Is Shedding Merona and Mossimo and Adding New Brands Instead.” *Los Angeles Times* (Aug. 21, 2017). <[https://www.latimes.com/business/la-fi-target-merona-mossimo-20170821-story.html>](https://www.latimes.com/business/la-fi-target-merona-mossimo-20170821-story.html) (accessed Dec. 15, 2023). As another example, Tesco, a supermarket chain, discontinued a streaming service it offered, Blinkbox. Upon that discontinuation, Tesco lost use of the content licenses it had acquired from Disney, despite having made significant investments in developing digital streaming and promoting usage of those licenses. *See* “Tesco’s Blinkbox Starts Carrying Disney Movies.” *Washington Times* (Apr. 4, 2012). <[https://www.washingtontimes.com/news/2012/apr/4/tescos-blinkbox-starts-carrying-disney-movies>](https://www.washingtontimes.com/news/2012/apr/4/tescos-blinkbox-starts-carrying-disney-movies) (accessed Dec. 15, 2023); Thomson, Amy. “Tesco Abandons Video-Streaming Ambitions in Blinkbox Sale.” *Bloomberg* (Jan. 8, 2015). <[https://www.bloomberg.com/news/articles/2015-01-08/tesco-abandons-video-streaming-ambitions-in-blinkbox-sale?embedded-checkout=true>](https://www.bloomberg.com/news/articles/2015-01-08/tesco-abandons-video-streaming-ambitions-in-blinkbox-sale?embedded-checkout=true) (accessed Dec. 15, 2023); Brian, Matt. “Tesco Has Given Up on Blinkbox.” *AOL* (July 19, 2019). <[https://www.aol.com/news/2015-01-26-tesco-gives-up-on-blinkbox.html>](https://www.aol.com/news/2015-01-26-tesco-gives-up-on-blinkbox.html) (accessed Dec. 15, 2023).

83.

84. Arm's treatment of its licensees as separate from each other is consistent with negotiation theory and important business considerations. As described in Part III.A, negotiation theory predicts that Arm would negotiate differently with its various ALA counterparties, based on Arm's perception of the counterpart's BATNA (and therefore the ZOPA for the negotiation). Indeed, the evidence provided in Part IV confirms that Arm did in fact negotiate different ALAs with different counterparties. If there could be leakage from one ALA to another,

due to an un-enforced or under-enforced [REDACTED], Arm would need to negotiate based on a lowest-common-denominator perceived BATNA among all its existing and possible counterparties. This one-size-fits-all negotiation approach would shrink the ZOPA, possibly creating a no-ZOPA situation even though a ZOPA would exist in each of the tailored negotiations with individual counterparties. The result would be a significant social welfare loss compared to the situation where Arm could negotiate tailored agreements with counterparties that are protected by [REDACTED] that effectively silo the ALAs.

85. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
86. To summarize, negotiation theory and important business considerations dictate that a licensor should be able to keep its licensees separate from each other using separate license agreements. [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED].

Arm keeps each of its ALA licenses separate from each other and maintains control of its licensing model through its [REDACTED] that require [REDACTED]. If Arm's licensees were allowed to assume the benefit of another entity's license (especially if the latter's license provided for lower royalty rates), Arm's entire business model would be severely threatened.

87. Keeping licensees and customers separate is a common business practice. For example, Microsoft has different retail licensing terms (e.g., governing capacity, cost, etc.) based on whether a customer is a government organization, educational entity, or a non-profit, as well as based on institution size.¹²¹ Similarly, Adobe offers different licensing for businesses (large enterprise companies vs. small to midsize), government, and educational institutions that differ in terms of management, billing, and other factors.¹²² In general, for

¹²¹ “Licensing Options for Industries—Government.” Microsoft. <<https://www.microsoft.com/en-us/licensing/licensing-programs/licensing-for-industries?activetab=licensing-for-industries-pivot:primaryr2>> (accessed Dec. 15, 2023); “Licensing Options for Industries—Education.” Microsoft. <[https://www.microsoft.com/en-us/licensing/licensing-programs/licensing-for-industries-pivot:primaryr3](https://www.microsoft.com/en-us/licensing/licensing-programs/licensing-for-industries?activetab=licensing-for-industries-pivot:primaryr3)> (accessed Dec. 15, 2023); “Licensing Options for Industries—Nonprofit.” Microsoft. <<https://www.microsoft.com/en-us/licensing/licensing-programs/licensing-for-industries?activetab=licensing-for-industries-pivot:primaryr4>> (accessed Dec. 15, 2023).

¹²² Foxen, David. “Adobe Licensing Quick Guide.” *ITA Asset Management*. <<https://www.itassetmanagement.net/wp-content/uploads/2014/07/Adobe-Licensing-Quick-Guide.pdf>> (accessed Dec. 15, 2023); Pourhadi, Soroush. “Adobe Licensing Guide.” *vScope* (Aug. 12, 2019). <<https://www.vscope.net/blog/adobe-licensing-guide>> (accessed Dec. 15, 2023).

companies where licensing technology is critical, siloed licenses permit customer segmentation, which is a marketing tool that is taught at virtually every business school in the world.

B. Terms That Were Considered and/or Offered Previously for a Re-negotiated License Cannot Simply Be Adopted Later.

88. In the but-for world in which Qualcomm did not allegedly breach its contractual obligations to Arm, the two parties would possibly have arrived at new licensing agreements through a renegotiation process.¹²³ However, the potential terms and amounts considered and/or offered by Arm previously during such a process are not necessarily appropriate later in time, particularly where the conditions and factors impacting such terms and amounts have changed considerably. This is especially true here where the original ALA between Qualcomm and Arm was entered into on September 29, 2003, and the Amended and Restated ALA was entered into on May 30, 2013, many years before Arm and Nuvia entered into their ALA.¹²⁴ Given the passage of time, there is no reason to think that Arm would have been willing to grant the same terms it provided Qualcomm to Nuvia. Given the business environment and ecosystem

¹²³ The record reflects that renegotiations were commenced, although a deal was not reached. Williamson Dep. 16:21-18:14, 162:5-163:10, 169:24-175:5 (discussing negotiations with Qualcomm over [REDACTED]).

¹²⁴ [REDACTED]

in which Arm and its competitors operate, the terms and amounts that the parties may have considered at some point in time in the past may no longer be appropriate with the passage of time and cannot simply be adopted at some point in the future.

89. In terms of negotiation theory, it is well understood that BATNAs can shift over time, which then shifts the ZOPA, which in turn affects negotiation tactics and strategy, which in turn affects negotiation outcomes. The terms that the parties would have possibly achieved at one point in time do not have predictive power for a subsequent point in time, if BATNAs or perceived BATNAs have changed.

C. Predicting the Outcome of a Renegotiated ALA Would Be Extremely Difficult.

90. Given that Qualcomm should have known about the [REDACTED] Nuvia's licenses to Qualcomm upon its acquisition of Nuvia, Qualcomm could have renegotiated Nuvia's licenses with Arm. Consistent with the prediction, Arm attempted to "negotiate[] with Qualcomm" for "more than a year" in order to "reach an agreement regarding Qualcomm's unauthorized acquisition of

Nuvia's 'in-process technologies' and license," but was unable to reach an agreement.¹²⁵

91. Given the complexities of this deal, predicting exactly how the deal would turn out within the ZOPA even prior to this lawsuit, and without the attendant publicly from the lawsuit, would be extremely difficult. This is particularly true here because a hypothetical re-negotiation would involve dozens of important issues (and many more less critical issues). Part III.B describes why predicting the result of a multi-issue negotiation is even more difficult than predicting the outcome of a single-issue price negotiation. For these reasons, quantitative analysis of this hypothetical would need to factor in many considerations and be subject to a large amount of uncertainty, making it difficult to assess the value of the outcome in dollar terms from Arm's perspective. In addition, any such quantitative analysis would not cover what is perhaps the most significant harm at issue here: the harm to Arm's reputation and its licensing ecosystem.¹²⁶

¹²⁵ Complaint ¶ 37. *See also* Williamson Dep. 16:21-18:14, 162:5-163:10, 169:24-175:5
[REDACTED]
[REDACTED]).

¹²⁶ Abbey Dep. 324:2-8 ("At the end of the day, Arm's an IP company. Our confidential information, our intellectual property is so germane to what we do. [REDACTED]
[REDACTED] 361:12-19 ("[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]")).

92. The ZOPA that may have existed previously, moreover, may no longer exist currently due to substantial changes since the parties attempted to negotiate a resolution of Qualcomm's acquisition of Nuvia and its failure to obtain consent to the assignment of Nuvia's ALA. For example, while the parties previously were negotiating only as to the benefit that would accrue to Qualcomm (i.e., the assignment of the Nuvia ALA and Qualcomm's use of Nuvia's technology developed using Arm's technology and IP under the Nuvia ALA), any such negotiation now would need to consider the harm to Arm given the public defection and breach of Arm's largest partner (Qualcomm), the impact of Qualcomm's breach on other ALA licensees and potential licensees, the potential for other ALA licensees to seek more favorable terms for themselves in view of Qualcomm's breach, and the potential for other ALA licensees to take more extreme negotiating positions given Qualcomm's breach. These factors did not exist at the time of the prior negotiation.

D. Non-Enforcement Could Have Negative Follow-On Effects That Are Impossible to Quantify.

93. Any commercial negotiation must be considered in the broader business context. In this case, Arm is part of the wider processor and chip industries and maintains business and licensing relationships with hundreds of companies, including other large players such as Apple, Microsoft, Marvell, and

Samsung.¹²⁷ Arm has also invested significantly in creating an entire ecosystem for its products, comprised of upstream IP and downstream partners and manufacturing processes.

94. Allowing noncompliance with Arm's licenses would erode authority over Arm's IP.¹²⁸ If, in the hypothetical world with a renegotiated deal between Arm and Qualcomm, Qualcomm were allowed to continue developing technology created under the Nuvia-Arm ALA, this would send a signal to the market and to Arm's other partners that Arm would not (or could not) enforce its contractually negotiated termination, change in control provisions, or other IP protections.¹²⁹ Arm's other licensees would take note and [REDACTED]

¹²⁷ Complaint ¶ 14; Manners, David. "ARM Adds an Architectural Licensee." *Electronics Weekly* (Apr. 21, 2015). <<https://www.electronicsweekly.com/news/business/finance/arm-adds-architectural-licensee-2015-04>> (accessed Sept. 11, 2023).

¹²⁸ Underscoring this general principle, Qualcomm's own representative testified that "it is important to Qualcomm that its licensees respect the terms of the license agreements that it has entered into[.]" Thompson, James. 30(b)(6) Deposition (Nov. 28, 2023) 12:6-16.

¹²⁹ Williamson Dep. 242:19-246:16 (testifying to harms to Arm from this case including "reputational damages and a fundamental long-term business challenge created [REDACTED]
[REDACTED]
[REDACTED]; stating "the impact

of companies conducting action similar to this, where they breach or move outside of our existing agreements, would be significantly harmful"; and stating "[s]hould we not protect our technology, it could impact the trust that companies more broadly feel in the ARM business model and the security with which they can build their business based on ARM's technology.").

[REDACTED] of their own agreements have no teeth.¹³⁰ These licensees may also follow Qualcomm's behavior and bypass Arm's licensing model by acquiring other ALA licensees [REDACTED]
[REDACTED]. In negotiation analytic terms, the perceived BATNA of *all* of Arm's customers and potential customers would change, to Arm's disadvantage.

95. This effect would be magnified by the fact that Qualcomm is a large partner, comprising as much as 34 percent of the Arm-based mobile computing chip market.¹³¹ Several other companies comprise large shares as well, including Apple.¹³²

¹³⁰ *Id.* 237:25-238:614 ("ARM brought this lawsuit in order to protect its intellectual property rights, ensure that our contracts are enforceable and enforced and that our reputation is protected as an IP licensing business, among other things. ... It is our intent that the obligations and provisions in our IP licensing deals are respected and adhered to, and that is our reason for bringing it."); Abbey Dep. 361:12-19 ("The fact of the matter is, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].").

¹³¹ "Strategy Analytics: Headline: Qualcomm, Apple and MediaTek Dominate the Arm-based Mobile Computing Chip Market." *Business Wire* (June 16, 2022). <<https://www.businesswire.com/news/home/20220616005125/en/Strategy-Analytics-Headline%C2%A0Qualcomm-Apple-and-MediaTek-Dominate-the-Arm-based-Mobile-Computing-Chip-Market>> (accessed Sept. 11, 2023). See also Segars Dep. 12:16-13:1.

¹³² "Strategy Analytics: Headline: Qualcomm, Apple and MediaTek Dominate the Arm-based Mobile Computing Chip Market." *Business Wire* (June 16, 2022). <<https://www.businesswire.com/news/home/20220616005125/en/Strategy-Analytics-Headline%C2%A0Qualcomm-Apple-and-MediaTek-Dominate-the-Arm-based-Mobile-Computing-Chip-Market>> (accessed Sept. 11, 2023).

96. If Arm was not able to enforce its [REDACTED] and require

Qualcomm to [REDACTED]

[REDACTED], it is therefore possible that Arm would suffer reputational consequences and other follow-on effects related to the perception of Arm's inability to enforce the very terms of its licenses. Any analysis of the impact of potential future renegotiations must include an analysis of the impact of this market signal.

97. It is also possible that continued noncompliance or a renegotiated deal could impact Arm's ventures into upstream or downstream markets. For example, a future merger with a downstream computing company could be frustrated by the reputational impact of companies assuming that Arm's upstream IP cannot be protected, which reduces Arm's financial value. The interconnected nature of Arm's partners and product ecosystem means that non-enforcement of its licensing agreement terms could have far-reaching implications.

98. Allowing Qualcomm to ignore its contractual obligation to [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] could also competitively disadvantages Arm's partners. For example, Google noted Qualcomm's acquisition as a "direct threat" because Qualcomm competes with Google in

mobile.¹³³ Samsung further stated that it was “worrying if Arm[] will lose motivation” in the partnership partially because “[Qualcomm] will go for its own development with Nuvia acquisition.”¹³⁴

99. The threat to Arm’s business model and the harm Arm would suffer is further supported by the testimony of Arm’s current CEO, Rene Haas. Mr. Haas testified that after renegotiations failed with Qualcomm, Arm was in “[REDACTED] [REDACTED]”¹³⁵ Mr. Haas further testified to the risks to Arm’s business model of [REDACTED].”¹³⁶ He also emphasized the [REDACTED] [REDACTED]

¹³³ Email from Pieter Arnout to Chris Bergey, et al., *Google Architecture License* (Jan. 15, 2021) (ARM_01241597 at ARM_01241598).

¹³⁴ Email from Hanseu Park to Will Abbey, *[Dear Will] Pre-meeting brief for Top meeting with S.LSI IY Kang* (Aug. 3, 2021) (ARM_01215632).

¹³⁵ Haas, Rene. Deposition (Dec. 12, 2023) 163:15-164:13 (“We were -- we were very much in uncharted waters at this point in time. [REDACTED] [REDACTED] We attempted over a number of months to find a settlement to assign a license. We did not find that settlement. We – I’ll say it differently. We did not get to a [REDACTED] [REDACTED] So as far as evidence of being harmed, I don’t even know how to quantify that, [REDACTED] [REDACTED].”).

¹³⁶ *Id.* 164:15-165:1.

So let's just say Qualcomm lets other companies know that,
You know what? [REDACTED]

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100. Other testimony from current and former Arm personnel highlights the importance of Arm’s business model and the effect of Qualcomm and Nuvia’s actions on the Arm ecosystem. Will Abbey, Arm’s Chief Commercial Officer, testified that Qualcomm using intellectual property that is unlicensed “██████████”
██████████”¹³⁸ Former CEO Simon Segars also testified that it “is not a five-minute exercise to assign contracts” and that licensees cannot “give their designs to somebody else.”¹³⁹

¹³⁷ *Id.* 165:2-15.

¹³⁸ Abbey Dep. 360:21-24 (“I think the fact that Qualcomm, they’re using intellectual property that’s unlicensed to them has [REDACTED]”)

[REDACTED].”), 362:1-5 (“We talked about that each contracts [verbatim] that we have is unique and specific and confidential. And so, [REDACTED]

¹³⁹ Segars Dep. 83:14-19 (“Having worked with other licensees in similar situations, we knew that, you know, they can -- that there are going to be differences between the contracts of the acquirer and the acquiree, and that it’s, you know, not a five-minute exercise to assign contracts.”), 100:5-8 (“[REDACTED]”)

101. All of these effects represent real economic damages to Arm. However, in my opinion, these effects would be virtually impossible to quantify.

102. I understand that Qualcomm may submit expert testimony regarding the impact to Qualcomm if the termination provisions of the Nuvia ALA were enforced. I reserve the right to fully address any such expert testimony in a rebuttal or reply report.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed this 20th day of December 2023 in Noord, Aruba.



Guhan Subramanian

Appendix A

Curriculum Vitae

Guhan Subramanian

Hauser 314
Harvard Law School
Cambridge, MA 02138

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Academic Positions Held

H. Douglas Weaver Professor of Business Law, Harvard Business School, 2007-Present

Joseph Flom Professor of Law and Business, Harvard Law School, 2004-Present

Faculty Chair, JD/MBA Program, Harvard University, 2004-Present

Faculty Chair, Program on Negotiation, Harvard Law School, 2018-Present

H. Douglas Weaver Visiting Professor of Business Law, Harvard Business School, 2006-07

Joseph Flom Assistant Professor of Law and Business, Harvard Law School, 2002-2004

Assistant Professor of Business Administration, Harvard Business School, 2001-2002

Lecturer in Business Administration, Harvard Business School, 1999-2001

Education

J.D., *magna cum laude*, Harvard Law School, 1998. Moot court competition winner. Editor, Harvard Law Review.

M.B.A., Harvard Business School, 1998.

A.B., *magna cum laude* (Economics), Harvard University, 1992. Phi Beta Kappa. Elected undergraduate student government president.

Books

Deals: The Economic Structure of Business Transactions (forthcoming Harvard University Press 2024) (with Michael Klausner)

Dealmaking: The New Strategy of Negotiations (2nd ed. 2020)

Corporate Law (2017) (with Holger Spemann)

Commentaries and Cases on the Law of Business Organization (4th ed. 2012) (with William T. Allen & Reinier Kraakman)

Dealmaking: The New Strategy of Negotiauctions (2011)

Commentaries and Cases on the Law of Business Organization (3rd ed. 2009) (with William T. Allen & Reinier Kraakman)

Commentaries and Cases on the Law of Business Organization (2nd ed. 2007) (with William T. Allen & Reinier Kraakman)

Academic Articles

Pills in a World of ESG and Activism, 1 *University of Chicago Business Law Review* 417 (2022) (with Caley Petrucci)

Freezeouts in Delaware and Around the World, 24 *University of Pennsylvania Journal of Business Law* 803 (2022)

Deals in the Time of Pandemic, 121 *Columbia Law Review* 1405 (2021) (with Caley Petrucci).

Sources of Power in Public Negotiations: A Framework Applied to Public-Public and Public-Private Negotiations, *Negotiation Journal*, (2020) (with Brian Mandell and Stephen Petraeus).

Go-Shops Revisited, 133 *Harvard Law Review* 1215 (2020) (with Annie Zhao). Selected by academics as one of the “top ten” articles in corporate/securities law for 2020, out of 323 articles published in that year.

Appraisal After Dell, in *The Corporate Contract in Changing Times: Is the Law Keeping Up?* (University of Chicago Press 2019).

The Effect of Prohibiting Deal Protection on M&A Activity: Evidence from the United Kingdom, 60 *Journal of Law & Economics* 1 (2017) (with Fernan Restrepo).

The New Look of Deal Protection, 69 *Stanford Law Review* 1013 (2017) (with Fernan Restrepo).

Deal Process Design in Management Buyouts, 130 *Harvard Law Review* 590 (2016). Selected by academics as one of the “top ten” articles in corporate/securities law for 2017, out of more than 565 articles published in that year.

Freezeouts: Doctrine & Perspectives, M&A HANDBOOK (Claire Hill & Steven Davidoff Solomon, eds.) (2016) (with Fernan Restrepo).

The Effect of Delaware Doctrine on Freezeout Structure and Outcomes: Evidence on the Unified Approach, *5 Harvard Business Law Review* 205 (2015) (with Fernan Restrepo).

Corporate Governance 2.0, *Harvard Business Review* (March 2015).

Delaware's Choice, *Delaware Journal of Corporate Law* 39, no.1 (Nov. 2014). Delivered as the 29th Annual Francis G. Pileggi Distinguished Lecture in Law in Wilmington, Delaware in November 2013. Selected by academics as one of the “top ten” articles in corporate/securities law for 2014, out of more than 525 articles published in that year

Delaware's Choice: A Brief Reply to Symposium Commentators, *Delaware Journal of Corporate Law* 39, no.1 (Nov. 2014).

Does Shareholder Proxy Access Improve Firm Value? Evidence from the Business Roundtable Challenge, *Journal of Law & Economics* 56 no.1 (Feb. 2013) (with Bo Becker and Dan Bergstresser).

Improving Director Elections, *Harvard Business Law Review* (Fall 2012) (with Bo Becker).

A New Era for Raiders, *Harvard Business Review* (Nov. 2010).

Is Delaware's Antitakeover Statute Unconstitutional? Evidence from 1988-2008, *The Business Lawyer* 65, no. 1 (May 2010). Selected by academics as one of the “top ten” articles in corporate/securities law for 2010, out of 447 articles published in that year.

Is Delaware's Antitakeover Statute Unconstitutional? Further Evidence and a Reply to Symposium Commentators, *Business Lawyer* 65, no. 1 (May 2010).

Auction? Negotiate? A Dealmaker's Guide, *Harvard Business Review* (Dec. 2009)

Go-Shops vs. No-Shops in Private Equity Deals: Evidence and Implications, *The Business Lawyer* 63, no. 1 (2008). Selected by academics as one of the “top ten” articles in corporate/securities law for 2008, out of 480 articles published in that year.

The Emerging Problem of Embedded Defenses: Lessons from Air Line Pilots Ass'n Intl. v. UAL Corp., *Harvard Law Review* 120, no. 5 (March 2007).

Post-Siliconix Freeze-Outs: Theory & Evidence, *Journal of Legal Studies* 36 (Jan. 2007). Selected by academics as one of the “top ten” articles in corporate/securities law for 2007, out of 484 articles published in that year.

Oracle vs. PeopleSoft: A Case Study, *Harvard Negotiation Law Review* 12 (Winter 2007) (with D. Millstone).

Bargaining in the Shadow of PeopleSoft's (Defective) Poison Pill, *Harvard Negotiation Law Review* 12 (Winter 2007).

Fixing Freezeouts, *Yale Law Journal* 115, no.1 (Oct. 2005). Selected by academics as one of the “top ten” articles in corporate/securities law for 2005, out of 410 articles published in that year.

Takeover Defenses and Bargaining Power, *Journal of Applied Corporate Finance* 17, no.4 (Fall 2005).

The Disappearing Delaware Effect, *Journal of Law, Economics & Organization* 20, no.1 (April 2004). Selected by academics as one of the “top ten” articles in corporate/securities law for 2004, out of 439 articles published in that year.

Bargaining in the Shadow of Takeover Defenses, *Yale Law Journal* 113, no.3 (Dec. 2003). Selected by academics as one of the “top ten” articles in corporate/securities law for 2004, out of 439 articles published in that year.

The Drivers of Market Efficiency in Revlon Transactions, *Journal of Corporation Law* 28, no.4 (Summer 2003).

The Trouble With Staggered Boards: A Reply to Georgeson’s John Wilcox, *Corporate Governance Advisor* 10, no.6 (Nov./Dec. 2002) (with L. Bebchuk & J. Coates).

The Influence of Antitakeover Statutes on Incorporation Choice: Evidence on the “Race” Debate and Antitakeover Overreaching, *University of Pennsylvania Law Review* 150, no.6 (June 2002).

The Powerful Antitakeover Force of Staggered Boards: Further Findings and a Reply to Symposium Commentators, *Stanford Law Review* 55, no.3 (Dec. 2002) (with L. Bebchuk & J. Coates). Selected by academics as one of the “top ten” articles in corporate/securities law for 2003, out of 450 articles published in that year.

The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence & Policy, *Stanford Law Review* 54, no.9 (June 2002) (with L. Bebchuk & J. Coates). Selected by academics as one of the “top ten” articles in corporate/securities law for 2002, out of 350 articles published in that year.

A Buy-Side Model of M&A Lockups: Theory and Evidence, *Stanford Law Review* 53, no.2 (Nov. 2000) (with J. Coates). Selected by academics as one of the “top ten” articles in corporate/securities law for 2001, out of 300 articles published in that year.

A New Takeover Defense Mechanism: Using an Equal Treatment Agreement as an Alternative to the Poison Pill, *Delaware Journal of Corporate Law* 23, no.2 (1998).

Note, Using Capital Cash Flows to Value Dissenters’ Shares in Appraisal Proceedings, *Harvard Law Review* 111, no.7 (May 1998).

Other Activities

Chairman of the Board, LKQ Corp. (NASDAQ: LKQ)

Faculty Chair, Advisory Committee on Shareholder Responsibility, Harvard University

Member, New York State Bar Association

Expert Testimony (Past 5 Years)

Vintage Rodeo Parent, LLC et al. v. Rent-A-Center, Inc., C.A. No. 2018-0927-SG (Del. Ch. 2019) (report & deposition)

Wilmington Trust Co. v. Hellas Telecommunications et al., Index No. 653357/2011 (NY 2019) (report & deposition)

Glencore Canada Corp. v. H.M.Q., Court File No. 2014-887(IT) G (Tax Court of Canada 2019) (report & trial testimony)

Parallax Energy LLC v. Cherniere Energy, Inc., NO. 14-17-00982-CV 08-13-2019 (Tx. 2019) (deposition)

In re Versum Materials Inc. Stockholder Litig., C.A. No. 2019-0206-JTL (Del. Ch. 2020) (reports).

Dillon Trust Co. LLC, et al. v. U.S., Nos. 17-1898T, 17-2022T, 17-2023T (reports, deposition & trial testimony) (U.S. Court of Federal Claims 2020)

Align Technology, Inc. v. SDC Financial, LLC et al. (Case No. 01-19-0002-0945) (Arbitration 2020) (deposition)

The Williams Companies Stockholder Litig., C.A. No. 2020-0707-KSJM (Del. Ch. 2020) (reports, deposition & trial testimony)

Roofers' Pension Fund v. Joseph C. Papa, et al., Case No. 2:16-cv-02805-MCA-LDW (2021) (reports & deposition)

In re WeWork Litigation, C.A. No. 2020-0258-AGB (2021) (report & deposition)

Matthew Sciabacucchi et al. v. Charter Communications et al., C.A. No. 11418-VCG (Del. Ch. 2021) (reports & deposition)

Bergeron Environmental & Recycling, LLC vs. LGL Recycling, LLC et al., Case No. 16-000158 (07) (Fla. 2021) (report, deposition & trial testimony)

In re Straight Path Communications Inc. Consol. Stockholder Litig., C.A. No. 2017-0486-SG (Del. Ch. 2021) (report, deposition & trial testimony)

City of Missoula v. Carlyle Infrastructure Partners, L.P., et al, Case No. 01-19-0000-1366 (Arbitration 2021) (report & trial testimony)

William J. Brown v. Matterport, Inc., C.A. No. 2021-0595-LWW (Del. Ch. 2021) (reports, deposition & trial testimony)

Deutsche Bank National Trust Co. v. Morgan Stanley ABS Capital, Inc., Case No. 651959/2013 (N.Y. 2022) (report & deposition)

In re Cloudera Inc. Securities Litig., Lead Case No. 19CV348674 (Cal. 2022) (report & deposition)

In re Tesla, Inc. Securities Litig., Case No. 18-cv-04865-EMC (N.D. Cal. 2022) (reports, deposition & trial testimony)

In Re Willowbrook Ethylene Oxide Litigation, No. 2018-L-010475 (Ill. 2022) (report, deposition & trial testimony)

In re Columbia Pipeline Group, Inc., C.A. No. 2018-0484-JTL (Del. Ch. 2022) (report, deposition & trial testimony)

DCP NGL Services, LLC, v. Anadarko Petroleum Corp. et al., CPR File No. G-21-54-S (Arbitration 2022) (report & deposition)

Politan Capital Management LP v. Masimo Corp et. Al., C.A. No. 2022-0948-NAC (Del. Ch. 2023) (reports & deposition)

Texas Pacific Land Corp. v. Horizon Kinetics LLC, C.A. No. 2022-1066-JTL (Del. Ch. 2023) (report, deposition & trial testimony)

Mewawalla v. Stanley C. Middleman et al., C. A. No. 21-cv-09700-EMC (N. D. Cal. 2023) (report & deposition)

Fishel et al. v. Liberty Media Corp., Sirius XM Holdings, Inc. et al., C.A. No. 2021-0820-KSJM (Del. Ch. 2023) (report & deposition)

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Davis v. Cerberus Capital Management, LP, et al., Index No. 654027/2013 (NY 2023) (report & deposition)

Current thru December 19, 2023

Appendix B

Materials Considered

Materials Considered¹

Legal

Complaint. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Aug. 31, 2022).

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Williams, Gerard III. Deposition (Nov. 3, 2023).

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¹ In preparing my report, I considered the documents listed here along with any items cited or referenced in the body and footnotes of my report.

Relevant Produced Documents

Agreements

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EXHIBIT 10

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

**UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE**

-----X
ARM LTD., a U.K. corporation, :
Plaintiff, : Civil Action No.
v. : 1:22-cv-01146
QUALCOMM INC., a Delaware :
corporation, QUALCOMM :
TECHNOLOGIES INC., a Delaware :
corporation, and NUVIA, INC., a :
Delaware corporation, :
Defendants. :
-----X

EXPERT REPLY REPORT OF PROFESSOR GUHAN SUBRAMANIAN

MARCH 25, 2024

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I. BACKGROUND

A. Qualifications

1. I serve as the H. Douglas Weaver Professor of Business Law at the Harvard Business School (“HBS”) and the Joseph Flom Professor of Law and Business at the Harvard Law School (“HLS”). I hold degrees in Economics, Law, and Business from Harvard University. On December 20, 2023, I submitted an expert report in the above-captioned matter (the “Original Report”).¹ My background, qualifications, and compensation are set forth in my Original Report, and my Curriculum Vitae, which includes a complete listing of my academic publications and expert witness testimony over the past five years, is attached as **Appendix A** of the Original Report.²

2. Since filing the Original Report, I have reviewed the reports submitted by Professor John Coates and Dr. Patrick Kennedy on behalf of Qualcomm and Nuvia.³ I have been asked by counsel for Arm, Morrison & Foerster LLP, to

¹ Capitalized terms used herein, but not otherwise defined, have the meanings assigned to them in my Original Report.

² Since filing the Original Report I was deposed in *Sjunde Ap-Fonden v. The Goldman Sachs Group, Inc. et al.* (S.D.N.Y. No. 18-cv-12084) (2024). I also have two new forthcoming papers: ESG Amnesia in M&A Deals, *Journal of Corporation Law* (forthcoming 2025) (with Caley Petrucci); and Redemption Mechanisms in Poison Pills: Evidence on Pill Design and Law Firm Effects, *The Business Lawyer* (forthcoming 2025) (with Olivier Baum).

³ Expert Rebuttal Report of Prof. John Coates. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Feb. 27, 2024) (“Coates Report”); Expert Report of Patrick F. Kennedy, Ph.D. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Feb. 27, 2024) (“Kennedy Report”).

assess the arguments and claims of Professor Coates and Dr. Kennedy as they relate to the opinions I put forth and the topics discussed in my Original Report. Nothing contained in those reports causes me to reconsider or change any of the conclusions that I reached in the Original Report, and I affirm those conclusions in this reply report (the “Reply Report”).

3. A complete list of the documents and data that I rely upon in reaching my conclusions in this matter is provided in **Appendix A: Materials Considered**.
4. I hold the opinions stated in this report with a reasonable degree of professional certainty. I reserve the right to amend or supplement my opinions and report, if appropriate, based on any additional discovery, or in response to opinions or reports of other experts in this matter.

B. Summary of Opinions

5. Based on my review of the Coates Report and the Kennedy Report, I conclude that:

- Professor Coates’ claim that [REDACTED] [REDACTED]” is irrelevant.
- Because the negotiated agreements provided distinct, different rights, Professor Coates is incorrect that Qualcomm did not need to negotiate with Arm following the Nuvia acquisition.
- Professor Coates’ distinction between [REDACTED] [REDACTED] is wrong, illusory, and incoherent.

- Professor Coates does not dispute that the plain language of the Nuvia ALA [REDACTED] [REDACTED]. Contrary to Professor Coates' assertion, this would include [REDACTED] [REDACTED].
 - Professor Coates' own examples and Dr. Kennedy's failure to quantify damages demonstrate why damages here could not be calculated with reasonable certainty.
6. I explain these conclusions in the remainder of this report.⁴

II. PROFESSOR COATES' CLAIM THAT "ARM'S ALAS COULD VERY WELL COVER IDENTICAL TECHNOLOGY" IS IRRELEVANT.

7. In the Original Report, I observed that Arm negotiated different ALAs with Qualcomm and Nuvia. I provided examples of the differences between the Qualcomm and Nuvia ALAs, including [REDACTED] [REDACTED].⁵ I concluded that "[t]he uniqueness of these contracts, as well as their individualized provisions, indicates that each was the product of negotiations between the parties and Arm, and as such, each reflects the deliberate intentions and expectations of Qualcomm or Nuvia, respectively."⁶

⁴ The opinions described herein are not exhaustive of all the errors and incorrect assertions Professor Coates makes in his report.

⁵ Original Report at Table 1.

⁶ *Id.* ¶ 63.

8. Professor Coates does not challenge this straightforward conclusion. Instead, he engages in an effort to distract:

Professor Subramanian ... reviewed nine of ARM's at least 17 ALAs with parties other than Qualcomm and NUVIA that are listed on ARM's ALA redaction log. It is not clear why Professor Subramanian chose not to review *all* ARM's ALAs or how he selected the ALAs he reviewed.⁷

9. According to Professor Coates, this alleged "review of incomplete and redacted contracts ... precludes Professor Subramanian from offering any reliable assessment as to the degree of individualization in ARM ALAs at large."⁸
10. Professor Coates apparently misunderstands the purpose of my review. These nine additional ALAs are documents that I "[c]onsidered" in my analysis.⁹ I found that these ALAs were instructive examples of how [REDACTED]

[REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]¹⁰ I did not make any claims in my Original Report about how these nine additional ALAs may have been negotiated or whether they covered identical or different technology, and they

⁷ Coates Report ¶ 82 (emphasis in original).

⁸ *Id.* ¶ 83.

⁹ See Original Report at Appendix B ("Materials Considered").

¹⁰ See *Id.* ¶¶ 67-69, 71.

are not relevant for my conclusion that the Qualcomm and Nuvia ALAs each were “the product of negotiations … and as such, each reflects the deliberate intentions and expectations of Qualcomm or Nuvia, respectively.”¹¹ This conclusion is consistent with the evidentiary record regarding the negotiation of the Qualcomm ALA in 2013 and the later negotiation of the Nuvia ALA in 2019.¹² Professor Coates’ attempt to attack my methodology is nothing more than an effort to distract from this straightforward conclusion.¹³

11. Notably, Professor Coates does not identify a single ALA that challenges or contradicts my analysis, i.e., that demonstrates a lack of individualization in Arm’s ALAs. Presumably, if Professor Coates had reviewed Arm’s ALAs and found some to be indistinguishable, he would have put this forward in his arguments. His inability to cite *any* contract that lacks “highly individualized terms”¹⁴ is a glaring omission in his analysis.

¹¹ *Id.* ¶ 63.

¹² I discuss documents and testimony relating to the unique negotiation considerations of the Nuvia and Qualcomm ALAs in my Original Report. *See id.* ¶¶ 27-29, 63-65.

¹³ Professor Coates also notes that the Annex 1 is redacted in these nine other agreements, suggesting—without basis—that the information in those redactions might have affected my analysis. He states: “My understanding from counsel is that ARM has not produced unredacted versions of these contracts. Because I have not been able to review these provisions, I am unable to evaluate how the redacted provisions would affect Professor Subramanian’s analysis of ARM’s ALAs or other issues in his report.” Coates Report ¶ 82. I can answer Professor Coates’ question: the redacted provisions of the other ALAs have nothing to do with my conclusion that the Qualcomm and Nuvia ALAs were the product of negotiations and business objectives of Qualcomm or Nuvia, respectively.

¹⁴ *See* Coates Report ¶ 80.

12. Professor Coates ignores the discussion in my Original Report that Arm's ALAs limit the license to the Arm Technology delivered by Arm to the licensee under that *particular* license.¹⁵ An ALA licensee is licensed only to what is delivered by Arm under that contract to that licensee, but Professor Coates assumes that an ALA provides some level of a generic license to Arm Technology, which is inconsistent with the relevant deposition testimony from Arm personnel.¹⁶

13. The fact that the Qualcomm and Nuvia ALAs are different confirms that they cover different implementations of Arm technology, as set forth in my Original Report.¹⁷ This conclusion is further supported by the fact that they have

¹⁵ Original Report ¶ 83.

¹⁶ See, e.g., Abbey, Will. Deposition (Oct. 27, 2023) ("Abbey Dep.") 144:6-145:2 ("[REDACTED]
[REDACTED] I don't know what I would have thought back in 2021, but what I know for a fact is that that's not something that we would support."); Segars, Simon. Deposition ("Segars Dep.") (Nov. 16, 2023) 100:5-8 ("And, you know, [REDACTED]
[REDACTED]"); Williamson, Paul. Deposition ("Williamson Dep.") (Nov. 9, 2023) 73:4-11 ("So it was my understanding and it is reiterated here that the [REDACTED]."); Haas, Rene. Deposition (Dec. 12, 2023) ("Haas Dep.") 99:23-100:15 ("I think from a broad standpoint, the -- the way to think about it is that the [REDACTED]. And for those rights to go just gratis over into another acquiring company could potentially be interpreted as a [REDACTED]. So it's fairly common practice in the industry for this to happen.").

¹⁷ Original Report ¶¶ 58-66.

[REDACTED] Nevertheless, Professor

Coates speculates that “[REDACTED]

[REDACTED].”¹⁹ In light of the significant differences of the rights granted between the Nuvia and Qualcomm ALAs, his speculation that the ALAs [REDACTED]

[REDACTED]” has the same logical structure as the possibility that I “could very well” write songs like Taylor Swift.²⁰

14. Even if one were to accept Professor Coates’ speculation that the Nuvia and Qualcomm ALAs [REDACTED],” that does not mean that the

[REDACTED] On the contrary, [REDACTED]

18 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁹ Coates Report ¶ 87. See also id. ¶ 89 (“While they are not identical agreements, Professor Subramanian fails to acknowledge that parts of the agreements, including [REDACTED]
[REDACTED], are the same, and therefore that ARM’s intentions and expectations, which presumably [REDACTED], are, at least in part, the same in both agreements.”). This is an inconsequential observation that can be reduced to the tautological fact that both ALAs are, by definition, agreements for the licensee to use Arm architecture technologies; this does not imply that these ALAs or any ALAs are interchangeable.

²⁰ A similar flaw undermines Professor Coates’ claim that the case studies cited in my Original Report are inapplicable to my conclusion that [REDACTED]
[REDACTED]. *Id.* ¶¶ 135-38. Professor Coates relies on mischaracterizations such as his misguided argument that the Qualcomm and Nuvia ALAs might cover identical technology in his attempt to distinguish these case studies. As I discussed in my Original Report, the case studies discussed in my original report remain applicable.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] This simple fact renders Professor Coates' claim that the ALAs [REDACTED] irrelevant, because the royalty rates for this allegedly [REDACTED] were [REDACTED] as were the relevant rights.

15. Differences in core contract terms like royalties reflect different negotiated deals between each of the parties, which would not be interchangeable in terms of business objectives. Negotiation theory posits that such differences would have resulted from the different scope of each collaboration, the different starting negotiating postures (including the BATNA) and bargaining power of Nuvia and Qualcomm, respectively, and/or trades across other issues that Nuvia or Qualcomm made with Arm to arrive at the final unique mix of contract terms.²³

²¹ Original Report ¶ 62.

²² *Id.*

²³ See, e.g., Michael Klausner and Guhan Subramanian, *Deals: The Economic Structure of Business Transactions*. Page Proofs. Harvard University Press, forthcoming (“Deals”) at 9-10, 15 (ARM_01431858 at ARM_01431876-77, ARM_01431882). Professor Coates alleges that this analysis is meant to “supply the meaning of contracts after they have been agreed to by parties” Coates Report ¶ 76, and that I “try to use principles of negotiation theory and

16. Moreover, even if the Nuvia and Qualcomm ALAs “cover[ed] identical technology” at some level of abstraction, notwithstanding [REDACTED]

[REDACTED]²⁴ the plain words in the contracts [REDACTED]

[REDACTED]

[REDACTED] Most relevant for present purposes, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

transactional practice to interpret a contract in a way that would usurp the role of the court to interpret the contract” and opine on “the intentions of the parties[.]” Coates Report ¶ 19. These claims are wrong. My usage of the principles of negotiation theory and transactional practice is not meant to interpret the Nuvia or Qualcomm ALAs in any legal sense, but rather to analyze the business objectives and negotiations that led to the plain language of the contract provisions and, from that perspective, analyze the reasons why certain IP protections would have been in place for the parties.

²⁴ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Original Report ¶ 83.

[REDACTED] This means that even if the ALAs “[REDACTED]
[REDACTED],” as Professor Coates claims, the plain language of the contract
states that [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]. These conclusions are consistent with the relevant deposition testimony.²⁷ Professor Coates fails to acknowledge that, as set forth in my Original Report, Arm’s ALAs limit the license to [REDACTED]
[REDACTED]
[REDACTED].²⁸ For this reason, Professor Coates’ suggestion that the ALAs [REDACTED] is irrelevant.

17. Professor Coates blurs the important distinction between the intellectual property (“IP”) covered under the contracts and Arm’s instruction set

26 [REDACTED]
[REDACTED]
[REDACTED]

²⁷ See, e.g., Segars Dep. 100:5-8 (“And, you know, at a high level, [REDACTED]
[REDACTED]); Abbey Dep. 144:6-145:2 (“[W]hat I do know is that you [REDACTED].”); Williamson Dep. 73:4-11 (“So it was my understanding and it is reiterated here that the Nuvia ALA [REDACTED]”); Haas Dep. 99:23-100:15 (“I think from a broad standpoint, the -- the way to think about it is that the license rights [REDACTED]. And for those rights to go just gratis over into another acquiring company could potentially be [REDACTED] So it’s fairly common practice in the industry for this to happen.”).

²⁸ Original Report ¶ 83.

architecture (“ISA”), one component of that IP.²⁹ While Professor Coates observes that both the Nuvia and Qualcomm ALAs [REDACTED] [REDACTED],³⁰ this observation is not informative as to the parties’ rights under their respective licenses. To see the point, I highly doubt that, prior to Qualcomm’s acquisition of Nuvia, Professor Coates would have claimed that Qualcomm had a right to use Nuvia’s Arm-compliant designs, simply because [REDACTED].

Knowing that the two ALAs did not have such overlap prior to the acquisition, Professor Coates has no basis to assume that the Nuvia ALA contained nothing of value to assign to Qualcomm, let alone did not require assignment.³¹

18. Finally, Professor Coates’ claim that the ALAs [REDACTED] [REDACTED]” is flatly contradicted by the actions of the parties. Professor Coates provides a detailed account of the negotiations between Qualcomm and Arm over the Nuvia ALA following Qualcomm’s acquisition of Nuvia.³² None of

²⁹ See, e.g., Coates Report ¶¶ 88-89.

³⁰ Id. ¶ 37.

³¹ See id. ¶¶ 88-89, 94, 117 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³² Id. ¶¶ 52-67.

these negotiations would be necessary if the ALAs [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] I now examine this negotiation between Qualcomm and Arm in more detail.

III. BECAUSE THE NEGOTIATED AGREEMENTS PROVIDED DISTINCT, DIFFERENT RIGHTS, PROFESSOR COATES IS INCORRECT THAT QUALCOMM DID NOT NEED TO NEGOTIATE WITH ARM FOLLOWING THE NUVIA ACQUISITION.

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] As a result of these factors, Qualcomm and Arm negotiated at length over possible terms that would have permitted Qualcomm to continue using the Arm technology in Nuvia applications.³⁵

20. Professor Coates provides an extensive account of these negotiations in his report.³⁶ He tries to obfuscate the situation by describing the fact that

³³ Original Report ¶¶ 58-66.

³⁴ *Id.*

³⁵ *Id.* ¶¶ 70-76.

³⁶ Coates Report ¶¶ 52-67.

“Qualcomm and ARM continued to communicate,” there was “communication” between the parties, that Qualcomm had “communications with ARM around the time of the NUVIA acquisition,” and that “conversations between the parties did not advance,” but he eventually concedes that these “communications” and “conversations” were in fact “[n]egotiations.”³⁷ The fact that Qualcomm perceived the need to negotiate with Arm directly contradicts Professor Coates’ suggestion that the ALAs [REDACTED]
[REDACTED]

21. Professor Coates also asserts that “Qualcomm’s existing ALA with ARM meant that [REDACTED]
[REDACTED] NUVIA.”³⁸ If Professor Coates is simply claiming that Qualcomm did not need to acquire Nuvia, then I agree; nothing required Qualcomm to acquire Nuvia. However, if Professor Coates is claiming that, because (in his opinion) “ARM’s ALAs [REDACTED],”³⁹ that Qualcomm could use the Arm technology in Nuvia products without Arm’s approval, that is a stunning and unsupported claim. It contains no analysis of the contracts or the businesses; it requires technical expertise that Professor

³⁷ See *id.* ¶¶ 54, 56, 63, 67, 94.

³⁸ *Id.* ¶ 117.

³⁹ *Id.* ¶ 87.

Coates does not claim to have; and it is directly contradicted by the contractual terms that Professor Coates cites in his report and the deposition testimony from the relevant Arm personnel.⁴⁰

22. The idea that Qualcomm did not need to negotiate with Arm is also directly contradicted by the contemporaneous statements of the parties. I summarized some of these statements in my Original Report.⁴¹ For example, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] ■ [REDACTED]
[REDACTED]
[REDACTED] ■ [REDACTED]
[REDACTED]

[REDACTED] ■ Professor Coates ignores this overwhelming evidence of the need to negotiate—from Nuvia itself—that directly contradicts

⁴⁰ See, e.g., Segars Dep. 100:5-8; Abbey Dep. 144:6-145:2; Williamson Dep. 73:4-11; Haas Dep. 99:23-100:15.

⁴¹ Original Report ¶¶ 72-76.

42 [REDACTED]
[REDACTED]
43 [REDACTED]
[REDACTED]
44 [REDACTED]
[REDACTED]
[REDACTED]

his suggestion that Qualcomm did not need to negotiate for the right to use Arm technology in Nuvia products.

23. In order to avoid these facts, Professor Coates claims that parties can have lots of reasons to negotiate even if they do not have to:

[P]arties may seek consent for a number of other reasons, including, for example, to manage the potential risk of tensions with a counterparty that has or might assert rights under contracts that do not include provisions addressing all possible contingencies, to convey efforts to cooperate, to update and reset overall terms governing an ongoing commercial relationship, or to expand, contract, or right-size terms and conditions for both parties.⁴⁵

24. All of these possible reasons to negotiate are speculation, with no basis in the record. And the actual record is clear that Qualcomm negotiated with Arm because it had to.⁴⁶

25. Professor Coates' speculation about alternative reasons to negotiate is also irrelevant. All of these possible reasons would seek to achieve a better outcome than one's BATNA. However, these reasons do not change the BATNA itself. The BATNA in this case, based on the record demonstrating the business

⁴⁵ Coates Report ¶¶ 94-95. Presumably arguing in the alternative, Professor Coates argues that "negotiation theory and transactional practice are not relevant in a contract dispute[.]" *Id.* ¶ 75. This facially absurd claim would render *any* analysis related to contract negotiation—including Professor Coates' own—inapplicable in this matter, or indeed any contractual dispute matter. Contrary to Professor Coates' claim, the negotiation theory that underpins the Qualcomm and Nuvia ALAs can shed light on the business justifications and processes that resulted in each ALA.

⁴⁶ See *supra* ¶ 22, n. 41-44.

context of the Nuvia ALA contract, is that Qualcomm could not use the Arm technology in Nuvia products without getting Arm's consent. This is reflected, among other things, by the fact [REDACTED]

[REDACTED]

[REDACTED] Professor Coates' claim is yet again an effort to distract from this basic point.

26. Despite his claims suggesting it was unnecessary and meaningless for Qualcomm to negotiate, Professor Coates attempts to draw unsupported conclusions from Arm's negotiating posture, noting that Arm did not immediately terminate Nuvia's ALA upon its acquisition and claiming that Arm would "seek to protect its rights more promptly" if it were "concerned about improper usage of its technology[.]"⁴⁸ For Professor Coates to penalize Arm for attempting to cooperate and re-negotiate a license agreement with Qualcomm rather than immediately resort to costly litigation, while simultaneously claiming that Qualcomm's willingness to negotiate means nothing, is a double standard of the highest order. The far simpler explanation, supported by the principles of negotiation theory, is that both sides were willing

⁴⁷ [REDACTED]

[REDACTED]

[REDACTED]

⁴⁸ Coates Report ¶ 118.

to negotiate because there was a ZOPA representing value to be claimed between them. Specifically, Qualcomm could structure a deal allowing it to license the valuable Arm-based Nuvia technology, and Arm could avoid the cost and relationship damage of having to protect its IP in court.

27. Additionally, I also disagree with Professor Coates' assertion that my application of negotiation theory is irrelevant to the Nuvia ALA with respect to the consent to the assignment provision because certain employees may have believed they could not "unreasonably withhold" consent.⁴⁹ Yet again, Professor Coates mischaracterizes the evidence. He claims that "ARM's own employees believed such a requirement existed," but in fact he cites to only one Arm employee (who was not an attorney), and this employee was merely responding to an assertion by Qualcomm that background California law added a reasonableness requirement.⁵⁰ In any event, as I discussed in my Original Report, the absence of the "may not be unreasonably withheld" clause is a licensor-friendly feature and would have provided more bargaining leverage to Arm in the case of a subsequent acquiror of Nuvia (such as Qualcomm). I also reviewed other ALAs Arm entered into with [REDACTED]

⁴⁹ *Id.* ¶ 147.

⁵⁰ *Id.* n. 246.

[REDACTED] which were separately negotiated and included the “may not be unreasonably withheld” clause.⁵¹

IV. PROFESSOR COATES’ DISTINCTION BETWEEN [REDACTED] IS WRONG, ILLUSORY, AND INCOHERENT.

28. Professor Coates draws an artificial and incorrect distinction between [REDACTED] Specifically, he asserts that [REDACTED] “only have consequences for the contract in which the provision appears” and “are intended to protect against transfers of (or transfers of rights under) those contracts themselves,”⁵² while [REDACTED] “give one party a right to veto, approve, or derive specific payouts (such as in a buy-sell arrangement, or a buyout option) upon the event of a change in control for the other contractual party.”⁵³ Even if this distinction were correct (it is not), it is a straw man. No one is arguing that Arm had the right to [REDACTED] [REDACTED] of Nuvia.⁵⁴ Yet again, his analysis is an effort to complicate and obfuscate the basic facts.

⁵¹ Original Report ¶¶ 57, 68-69.

⁵² Coates Report ¶ 101.

⁵³ *Id.* ¶ 100.

⁵⁴ *Id.* ¶ 103.

29. Contrary to Professor Coates' suggestion, he and I agree [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Professor Coates nevertheless attempts the following sleight-of-hand:

No experienced M&A professional would treat an [REDACTED]

[REDACTED]. As such, an anti-assignment provision would not customarily be expected to imply, much less explicitly grant, the right to secure an injunction to block a transaction. ... Professor Subramanian's failure to distinguish between change-in-control and anti-assignment provisions appears to imply that [REDACTED]

⁵⁶

30. This is a straw-man argument: no one is arguing that Arm had the right to "secure an injunction to block" Qualcomm's acquisition of Nuvia or that "ARM was entitled to prohibit Qualcomm's acquisition of NUVIA."⁵⁷ Professor Coates' insinuation that I say this is simply wrong.

31. The straw man arises from Professor Coates' misunderstanding of CIC provisions. He claims that [REDACTED] "give one party a right to veto" a

⁵⁵ See, e.g., Original Report ¶¶ 54, 60.

⁵⁶ Coates Report ¶¶ 103, 120.

⁵⁷ *Id.*

transaction,⁵⁸ “customarily give a contract party a true property right capable of effectively blocking an acquisition,”⁵⁹ and “can provide rights to effectively block or veto a change in control[.]”⁶⁰ This is wrong. Professor Coates provides no support for what he claims all “experienced M&A professional[s]” allegedly know about [REDACTED]⁶¹ because there is none. [REDACTED] do not necessarily or even customarily give veto rights; they simply, as here, trigger certain rights and obligations of the contracting parties. Morgan Lewis, for example, states: “[REDACTED]

[REDACTED].”⁶² The Practical Law Institute similarly defines a [REDACTED]

⁵⁸ *Id.* ¶ 100.

⁵⁹ *Id.*

⁶⁰ *Id.* ¶ 105. If Professor Coates is merely arguing that the consequence of some [REDACTED] can be so onerous as to block a change of control, as a practical matter, then he and I have no disagreement. But that is not the case with the [REDACTED] because Qualcomm acquired Nuvia.

⁶¹ *See id.* ¶ 103.

⁶² Perry, Jessica and Jared Wilkerson. “Real-World Litigation Impacts of Contract Clauses in Energy Contracts: Defining Change of Control Provisions Favorably.” *Morgan Lewis* (Mar. 29, 2023). <<https://www.morganlewis.com/blogs/powerandpipes/2023/03/real-world-litigation-impacts-of-contract-clauses-in-energy-contracts-defining-change-of-control-provisions-favorably>> (accessed Mar. 4, 2024).

[REDACTED] Under these definitions, [REDACTED]

[REDACTED] n, as it is customarily understood in transactional practice and in the negotiations literature. And, in any event, the label used for the [REDACTED]

[REDACTED] does not change the functional analysis of that provision.

32. Professor Coates contrasts his “veto right” and “right to secure an injunction to block a transaction” that allegedly arises from a [REDACTED]

[REDACTED] “Broad veto rights over change of control are not customarily understood from anti-assignment clauses, even if they contain a transactional trigger.”⁶⁴ This is correct. But no one is claiming that the [REDACTED]

[REDACTED].⁶⁵ Instead, what the [REDACTED] *does* do is prevent third parties such as Qualcomm from using the Arm technology contained in Nuvia products

⁶³ “Change of Control Clause.” *Practical Law*. <[https://uk.practicallaw.thomsonreuters.com/0-382-3325?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/0-382-3325?transitionType=Default&contextData=(sc.Default)&firstPage=true)> (accessed Mar. 4, 2024).

⁶⁴ Coates Report ¶¶ 101, 103.

⁶⁵ Similarly, Professor Coates quotes research from Ayotte and Hansmann stating: “If the counterparty to a contract with a corporation *wishes to limit the persons to whom ownership or control of the corporation can be sold*, it must do this through specific language to that effect in the contract[.]” *Id.* ¶ 105 (emphasis added). I do not disagree with this straightforward assertion, and it does not change my analysis of the [REDACTED]

without getting Arm's approval first, in part because Arm could terminate the Nuvia agreements (as it did) in the absence of consent to assignment.⁶⁶

33. Even the “leading practitioners”⁶⁷ who Professor Coates cites make the same point. Professor Coates quotes an article by two partners from Skadden Arps for the proposition that a “common misconception in drafting and interpreting contracts” is that “[REDACTED]

”⁶⁸ But here is what the quoted language says in full:

[REDACTED]. However, prohibitions on changes of control are likely not implied from a simple [REDACTED] ... Restrictions on changes of control must therefore be separately addressed. A change-of-control provision gives a party[] certain rights in connection with the other party's transaction. Although some [REDACTED] purport to void the transaction, the more direct approach is to provide that a change of control is equivalent to a material breach of the agreement or grounds for termination, or both.⁶⁹

⁶⁶ As I described in my Original Report, [REDACTED] are common ways for businesses to protect against situations where an acquisition of a licensee would be used by the acquiring company to bypass the licensor's licensing framework and gain access to licensed technology by acquiring the licensee. Original Report ¶ 42. That is, [REDACTED]

67 Coates Report ¶ 106.

68 *Id.*

⁶⁹ Ziff, Elaine D. and John G. Deming. "IP Licenses: Restrictions on Assignment and Change of Control." *Practical Law Company* (2012). <https://www.skadden.com/-/media/Files/Publications/2012/02/Publications2679_0.pdf?sc_lang=en> (accessed Mar. 4, 2024) at 10, cited in Coates Report ¶ 106.

34. In other words: if you want to give one party a veto right over a change of control, you must do so explicitly. [REDACTED] do not do this on their own; instead, they simply [REDACTED], where further change-in-control language may be added to restrict assignment upon a change of control ([REDACTED]). I agree with this commonsense point. Professor Coates' insinuation that I succumb to a "common misconception" that an anti-assignment clause prohibits a change of control is simply wrong. Nowhere do I say this in the Original Report, and Professor Coates provides no such citation to support his insinuation.

35. When boiled down to its essence, Professor Coates' argument seems to be as follows: (1) [REDACTED] permit one or both parties to veto a change of control at the other; (2) I am confusing a [REDACTED] with an [REDACTED]

[REDACTED] (3) [REDACTED]

[REDACTED]; and (4) because of this difference, [REDACTED]

[REDACTED]

[REDACTED] None of these points are correct; and, even if they were, this distillation reveals the incoherence of the argument. The artificial and incorrect difference that Professor Coates claims between [REDACTED]
[REDACTED] is yet again nothing more than an effort to distract from the plain language of the contracts.

V. PROFESSOR COATES DOES NOT DISPUTE THAT THE [REDACTED] | [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

36. In yet another straw-man attack, Professor Coates repeatedly claims that I argue that Arm's ALA with Nuvia prevents Qualcomm from using Arm technology in its own products, pursuant to its own ALA with Arm.⁷⁰
37. This is an egregious mischaracterization of my report. No one is claiming that Qualcomm cannot use Arm's technology delivered under Qualcomm's ALA in Qualcomm's products. Instead, Professor Coates and I agree that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] As described in the Original Report, there are sound business

⁷⁰ See, e.g., Coates Report ¶¶ 92, 120.

⁷¹ Id. ¶¶ 29, 125 [REDACTED]

reasons for requiring the [REDACTED]

[REDACTED] 72

38. One such reason that I described is to protect against situations “where an acquisition of a licensee would ... dramatically change the scope of rights or obligations between the licensor and licensee[.]”⁷³ Professor Coates insists that this motivation cannot apply in this context because, according to him, there is nothing to “support the notion that there has been any change, let alone a dramatic change, in the scope of rights and obligations as between ARM and Qualcomm” with the Nuvia acquisition.⁷⁴

39. Professor Coates is incorrect. In the Original Report, I described how the anticipated business context was vastly different for Nuvia and Qualcomm’s agreements, with the negotiated terms reflecting Nuvia’s more limited market scope.⁷⁵ Professor Coates admits as much when he states that his

⁷² Original Report Section VI.A.

⁷³ *Id.* ¶ 42.

⁷⁴ Coates Report ¶ 112.

⁷⁵ Original Report ¶¶ 27, 65; Segars Dep. 113:24-115:17 (discussing how the royalty rates under Nuvia’s and Qualcomm’s ALAs differed and stating that “the agreement between Arm and NuVia [] anticipated fees and royalties based on what NuVia were intending to do.”); Herbert, Tim. Deposition (Oct. 25, 2023) (“Herbert Dep.”) 318:7-18 (reading from a document discussing “Nuvia/Qualcomm Plans” that “[Arm] discounted the ALA license fee to Nuvia because they had a limited scope, if Qualcomm wants to expand the usage to other markets, we expect to be renumerated.”); Williamson Dep. 38:23-39:24 (testifying that Qualcomm’s acquisition of Nuvia “could result in the core being deployed in any number of markets” including those beyond the originally anticipated market of cloud server designs), 62:24-63:24

“understanding is that the ‘expected work scope’ of the NUVIA ALA was limited to NUVIA’s design of a CPU for use in a system on a chip for the server market” while “the ‘expected work scope’ of the Qualcomm ALA did not appear to be limited to a specific market, such as the server market” and indeed included “custom CPUs for the mobile market” in “contrast” to Nuvia’s work.⁷⁶ Professor Coates appears to have misunderstood my argument, given that he agrees with it. The expected work scope for Nuvia’s collaboration with Arm was different than the expected work scope for Qualcomm’s collaboration with Arm at the time that each company’s ALAs were negotiated and drafted, prior to the Nuvia acquisition. These differences would be reflected in the different

(testifying that the Qualcomm ALA was agreed to in 2013 and that by 2021 [when Nuvia was acquired], it was “a very different time in the relationship and market”).

⁷⁶ Coates Report ¶¶ 113-14.

negotiations that occurred,⁷⁷ which produced different and non-interchangeable licensing agreements.⁷⁸

40. On the [REDACTED], Professor Coates yet again mischaracterizes my report, claiming that I assert that Arm and Nuvia

⁷⁷ I reiterate that Nuvia negotiators understood this fact at the time of negotiations with Arm and testified that the Nuvia ALA reflected Nuvia's unique start-up position. [REDACTED]

⁷⁸ Professor Coates also waves away negotiation differences relating to Nuvia's status as a start-up by insisting that Arm could have included a

Coates Report ¶¶ 115-16. This logical fallacy—that Arm could not structure a contract to protect its IP in the event of a change of control of Nuvia without bargaining for an absurdly broad right to veto any proposed acquisition of Nuvia—ignores the fact that more tailored solutions were available to Arm, such as the anti-assignment clause and transactional trigger it eventually included, and ignores the real negotiating differences that resulted from Nuvia’s unique business context, such as its status as a start-up. See Original Report ¶¶ 63-64.

“agree[d] to a [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]⁷⁹ Yet again, this is an absurd claim. No one is claiming that, upon a change in control, Nuvia must stop using its own technology that does not fall within the [REDACTED]

[REDACTED]. Instead, the plain language of the Nuvia ALA requires [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

⁷⁹ Coates Report ¶ 146 (emphasis added).

⁸⁰ *Id.* ¶¶ 29, 125 [REDACTED]

⁸¹ Original Report Section VI.A.

41. Professor Coates further asserts that the technology developed by Nuvia [REDACTED]
[REDACTED] would not be subject to [REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] But this claim ignores the plain language of [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Put simply, ownership does not provide a blanket
exception to contractual commitments or other legal obligations (e.g., many
companies are enjoined from using or selling products, notwithstanding their
ownership of those products, based on an injunction against patent
infringement).

VI. PROFESSOR COATES' OWN EXAMPLES AND DR. KENNEDY'S FAILURE TO QUANTIFY DAMAGES DEMONSTRATE WHY DAMAGES HERE COULD NOT BE CALCULATED WITH REASONABLE CERTAINTY.

42. Professor Coates argues in his report that the outcome of a hypothetical
renegotiation between Qualcomm and Arm over the licensing issues at hand is

⁸² Coates Report ¶ 123.

not necessarily “‘extremely difficult’ to predict.”⁸³ He provides examples of other contexts in which estimation is performed that lacks “great precision” or is “inherently imprecise,” such as valuing a business or determining damages for a hypothetical unspecified litigation.⁸⁴

43. While I agree that valuation is an imperfect science, Professor Coates’ examples relate to arenas wherein the prediction or estimation of an exact value is possible based on established methodologies, whether from specific techniques such as a “‘discounted cash flow’ valuation technique”⁸⁵ or because the harm in a hypothetical litigation is readily quantifiable.⁸⁶ Notably, he does not offer *any* examples of predicting the outcome of a multi-issue negotiation between sophisticated parties.

⁸³ *Id.* ¶¶ 142-44.

⁸⁴ *Id.* ¶¶ 140-41 (“[B]usinesses are nonetheless routinely capable of being valued quantitatively without requiring that one identify a specific value ‘with great precision.’ Consider the standard and well-accepted ‘discounted cash flow’ valuation technique of projecting future cash flows and discounting those cash flows to present value using an estimated cost of capital.”; “[I]nitial estimates of any loss or form of damage (at the time of a contract signing, and often at the time of breach) are inherently imprecise because they are estimates of counterfactuals[.] … [T]here are ways to arrive at an understanding of how to value a provision or to say that this is a reasonable range of outcomes. Courts do this all the time.”).

⁸⁵ *Id.* ¶ 140.

⁸⁶ *Id.* ¶ 141.

44. Under certain assumptions, negotiation theory provides an average prediction for single-issue negotiations, namely the midpoint of the ZOPA.⁸⁷ However, negotiation theory does not provide a prediction for multi-issue negotiations,⁸⁸ such as the hypothetical Arm-Qualcomm renegotiation.
45. The difficulty of predicting the outcome of this renegotiation is particularly high because over two years have passed since the breakdown of negotiations in this matter, making it even more inappropriate to use any proposals from the parties' previous talks to inform a current prediction, and that negotiation turned primarily on the benefit to Qualcomm, rather than the harm to Arm if Qualcomm proceeded without a license, thereby undermining Arm's licensing program. In particular, unlike the initial negotiation, a hypothetical renegotiation would have to account for the possibility that Arm's business model is threatened by a perceived weakening in its IP protection.^{89, 90} Professor

⁸⁷ Subramanian, Guhan. *Dealmaking: The New Strategy of Negotiations*, 2nd edition. New York: W. W. Norton & Company (2020) at 18.

⁸⁸ Graphically, the outcome of a multi-issue negotiation can fall anywhere in the green shaded area of Figure 2 in my Original Report ¶ 39.

⁸⁹ See Original Report ¶¶ 92-101.

⁹⁰ Professor Coates also contends that “[g]iven that almost one year passed from the NUVIA acquisition and ARM’s termination of the NUVIA ALA, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]” Coates Report ¶ 91. Professor Coates’ argument completely ignores that such a consequence is inherently tied to the outcome of this publicized litigation, which is of course still pending.

Coates contends that “ARM would have taken into account [these considerations] at the time of the parties’ prior negotiation” and incorporated them into the BATNA.⁹¹ This is a non sequitur; even if Arm had been thinking ahead to these possibilities if negotiations failed (a contention for which Professor Coates offers no support) it does not mean that these possibilities were baked into the numbers at the time, let alone could be quantified today. For example, while Arm might have contemplated “the possibility that Arm would trigger the [termination] provision if a renegotiated deal over the Nuvia licenses could not be completed,”⁹² Arm could not have known that Qualcomm would challenge Arm’s rights in exercising the [REDACTED]
[REDACTED], and thus would not have priced that impact into its position at the time.

46. Another of Qualcomm’s experts, Dr. Patrick F. Kennedy, also denies that the harm to Arm from a threat to its product ecosystem is difficult to quantify,⁹³

⁹¹ *Id.* ¶ 144.

⁹² Original Report ¶ 71, quoted in Coates Report ¶ 144.

⁹³ Kennedy Report ¶¶ 213-214.

instead asserting that “Arm’s damages in this matter can be calculated with reasonable certainty.”^{94, 95}

47. Despite this claim that damages *can* be calculated, Dr. Kennedy does not attempt to *actually* calculate damages in this matter. In fact, Dr. Kennedy does not even provide a description of a methodology he would use to calculate damages. These are glaring omissions, because Dr. Kennedy’s “professional experience includes assessing economic damages within and outside of the litigation environment.”⁹⁶ If damages were readily calculable in this case, as Professor Coates and Dr. Kennedy claim, one would think that Dr. Kennedy would have done so, in view of his background and professional experience, or, at the very least, provided a roadmap to doing so.

48. Dr. Kennedy’s claims ignore the high degree of uncertainty associated with the outcome of a hypothetical renegotiated deal. In fact, nowhere in Dr. Kennedy’s report does he consider negotiation theory at all. As such, even putting aside the documented impossibility of pinpointing the outcome of a multi-issue negotiation, Dr. Kennedy’s arguments are incapable of informing a reader

⁹⁴ *Id.* ¶ 214.

⁹⁵ Dr. Kennedy disagrees with my conclusions “[f]or the reasons discussed in detail in the preceding sections of this report,” but does not explicitly address any of the points I made in my Original Report, instead responding to another expert entirely. *Id.* As such, I respond to his central conclusions to the extent they relate to my analysis of a hypothetical renegotiated deal.

⁹⁶ *Id.* ¶ 4.

where within the wide ZOPA between Qualcomm and Arm a renegotiated deal might end up.

49. Dr. Kennedy asserts without any basis in negotiation theory that “[t]hese commercial negotiations [between Qualcomm and Arm, following the Nuvia acquisition] address issues at play in this litigation, and, therefore, demonstrate that Arm has been able to attach a monetary value to the issues in this litigation.”⁹⁷ In doing so, Dr. Kennedy inappropriately conflates a non-final proposal from one party during an on-going negotiation under different circumstances prior to termination with the final outcome of a negotiation. Dr. Kennedy also fails to consider the difficult-to-quantify factors of reputational harm, threats to Arm’s product ecosystem, and similar issues would not have been in play at the time of such offers two years ago, before the parties reached an impasse and Arm terminated the relevant agreements, but would have to be incorporated into the BATNA of a currently re-negotiated deal now that this case has gone to litigation based on Qualcomm’s flouting of its termination obligations and threats to Arm’s licensing programs.⁹⁸ Because Dr. Kennedy fails to apply the principles of negotiation theory relevant to understanding a

⁹⁷ *Id.* ¶ 83.

⁹⁸ In the Original Report, I documented how Arm’s reputation and licensing ecosystem would be damaged if it fails to protect its IP in this matter, based on testimony from Arm employees and relevant industry contextual factors. *See* Original Report ¶¶ 91, 93-100.

hypothetical renegotiation between Arm and Qualcomm, his conclusions are unsupported.

Dated March 25, 2024



Guhan Subramanian

Appendix A

Materials Considered

Materials Considered¹

Expert Reports

Expert Rebuttal Report of Prof. John Coates. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Feb. 27, 2024).

Expert Report of Patrick F. Kennedy, Ph.D. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Feb. 27, 2024).

Expert Report of Professor Guhan Subramanian. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and NuVia, Inc.* (D. Del. No. 1:22-cv-01146) (Dec. 20, 2023).

Depositions

Abbey, Will. Deposition (Oct. 27, 2023).

Gulati, Manu. 30(b)(1) Deposition (Oct. 12, 2023).

Haas, Rene. Deposition (Dec. 12, 2023).

Herbert, Tim. Deposition (Oct. 25, 2023).

Segars, Simon. Deposition (Nov. 16, 2023).

Williams, Gerard III. Deposition (Nov. 3, 2023).

Williamson, Paul. Deposition (Nov. 9, 2023).

Relevant Produced Documents

Agreements

Annex 1 to the Architecture License Agreement Between Arm Limited and NuVia, Inc (Mar. 27, 2020) (ARM_00057230).

Annex 1 to the Architecture License Agreement Between Arm Limited and Qualcomm Global Trading Pte, Ltd. (May 29, 2013) (ARM_00063298).

Master Royalty Schedule Between Qualcomm Global Trading Pte, Ltd. and Arm Limited (May 30, 2013) (LES-LTM-20780) (ARM_01298891).

Technology License Agreement (“ALA”) Between Arm Limited and NuVia, Inc. (Sept. 27, 2019) (ARM_00059183).

¹ In preparing my report, I considered the documents listed here along with any items cited or referenced in the body and footnotes of my report.

Emails

Email from Gerard Williams III to Lip-Bu Tan, *ARM latest* (June 19, 2019) (QCARM_0020011).

Email from Gerard Williams III to Tim Herbert, *Re: License payment model* (June 21, 2019) (QCARM_0020012).

Miscellaneous

Klausner, Michael and Guhan Subramanian. *Deals: The Economic Structure of Business Transactions*. Page Proofs. Harvard University Press, forthcoming (ARM_01431858).

Publications

“Change of Control Clause.” *Practical Law*. <[https://uk.practicallaw.thomsonreuters.com/0-382-3325?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/0-382-3325?transitionType=Default&contextData=(sc.Default)&firstPage=true)> (accessed Mar. 4, 2024).

Perry, Jessica and Jared Wilkerson. “Real-World Litigation Impacts of Contract Clauses in Energy Contracts: Defining Change of Control Provisions Favorably.” *Morgan Lewis* (Mar. 29, 2023). <<https://www.morganlewis.com/blogs/powerandpipes/2023/03/real-world-litigation-impacts-of-contract-clauses-in-energy-contracts-defining-change-of-control-provisions-favorably>> (accessed Mar. 4, 2024).

Subramanian, Guhan. *Dealmaking: The New Strategy of Negotiations*, 2nd edition. New York: W. W. Norton & Company (2020).

Ziff, Elaine D. and John G. Deming. “IP Licenses: Restrictions on Assignment and Change of Control.” *Practical Law Company* (2012). <https://www.skadden.com/-/media/Files/Publications/2012/02/Publications2679_0.pdf?sc_lang=en> (accessed Mar. 4, 2024).

EXHIBIT 11

ATTORNEYS EYES ONLY

Page 1

1

2 UNITED STATES DISTRICT COURT

3 FOR THE DISTRICT OF DELAWARE

4 ---oo---

5 ARM LTD., a UK Corporation,)

6 Plaintiff,)

7 vs.) C.A. No.

8 QUALCOMM INC., a Delaware) 22-1146 (MN)

9 corporation; QUALCOMM)

10 TECHNOLOGIES, INC., a Delaware)

11 Corporation, and NUVIA, INC.,)

12 a Delaware Corporation,)

13 Defendants.)

14 -----)

15

16 A T T O R N E Y ' S E Y E S O N L Y

17

18 Videotaped deposition of GUHAN

19 SUBRAMANIAN, taken on behalf of the

20 Defendant, pursuant to Notice, on

21 Thursday, April 18, 2024, at Morrison

22 & Foerster LLP, 250 West 55th Street,

23 New York, New York beginning at 9:08

24 a.m., and ending at 5:24 p.m.,

25 before ERICA RUGGIERI, CSR, RPR, CLR.

ATTORNEYS EYES ONLY

<p>1 2 APPEARANCES: 3 4 FOR THE PLAINTIFF: 5 MORRISON & FOERSTER LLP 6 BY: SCOTT LLEWELLYN, Esq. 7 4200 Republic Plaza 8 300 17th Street 9 Denver, Colorado 80202 10 303.592.2204 11 sllewellyn@mofo.com 12 13 FOR THE DEFENDANT: 14 PAUL WEISS LLP 15 BY: ERIN J. MORGAN, ESQ. 16 SAMANTHA MEHRING, ESQ. 17 1285 Avenue of the Americas 18 New York, New York 10019 19 emorgan@paulweiss.com 20 smehring@paulweiss.com 21 22 ALSO PRESENT: 23 NATHANIEL ARMSTRONG, Videographer 24 25</p>	<p>Page 2</p> <p>1 2 The location of today's 3 deposition is Morrison & Foerster 4 LLP located at 250 West 55th 5 Street, New York, New York. 6 I am not authorized to 7 administer an oath. I am not 8 related to any party in this 9 action, nor am I financially 10 interested in the outcome. 11 If there are any objections to 12 proceeding, please state them at 13 the time of your appearance. 14 Counsel and all present, 15 including remotely, will now state 16 their appearance and affiliation 17 for the record beginning with the 18 noticing attorney. 19 MS. MORGAN: Hi, I'm Erin 20 Morgan from Paul Weiss representing 21 the defendants and I'm here with my 22 colleague Samantha Mehring, also 23 from Paul Weiss. 24 MR. LLEWELLYN: Scott 25 Llewellyn, Morrison Foerster for</p>
<p>1 2 THE VIDEOGRAPHER: We are now 3 on the record. Good morning. The 4 time is 9:08 a.m. on April 18, 5 2024. 6 Please note that the 7 microphones are sensitive and may 8 pick up whispering and private 9 conversations. Please mute your 10 cell phones at this time. Video 11 recording will continue to take 12 place unless all parties agree to 13 go off on the record. 14 This is media unit one of the 15 video recorded deposition of Guhan 16 Subramanian taken in the matter of 17 Arm LTD versus Qualcomm, Inc., et 18 al., filed in the United States 19 District Court, District of 20 Delaware Case No. 1:22-CV-011460. 21 My name is Nathaniel Armstrong 22 representing Veritext and I am the 23 videographer. The court reporter 24 is Erica Ruggieri from the firm 25 Veritext.</p>	<p>Page 3</p> <p>1 2 SUBRAMANIAN - ATTORNEY'S EYES ONLY 3 Arm. 4 THE VIDEOGRAPHER: Thank you. 5 Will the court reporter please 6 swear or affirm the witness. 7 G U H A N S U B R A M A N I A N , 8 called as a witness, having been 9 duly sworn by a Notary Public, was 10 examined and testified as follows: 11 EXAMINATION BY 12 MS. MORGAN: 13 Q. Good morning, 14 Mr. Subramanian. 15 A. Good morning. 16 Q. Am I pronouncing your name 17 correctly? 18 A. Yes. 19 Q. Okay. You've been deposed 20 a few times before, right? 21 A. Yes. 22 Q. Approximately how many 23 times? 24 A. In my 25 years on the 25 faculty probably 90 to a hundred times.</p>

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<p style="text-align: right;">Page 186</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 things. It's a hypothetical. For 3 example, I might not have understood 4 some of the context or negotiation 5 principles just might not be 6 relevant in this particular 7 situation or the parties in the room 8 were not acting consistent with 9 those negotiation principles.</p> <p>10 The principles I'm offering 11 are considered to be customary 12 practice or best practice. So if a 13 party in the room was acting not 14 consistent with those principles, 15 that might explain it as well.</p> <p>16 Q. Your second opinion is: 17 "Due diligence in an M&A transaction 18 typically involves an examination of 19 license agreements. Consistent with 20 norms in transactional practice 21 Qualcomm and NuVia seems to be aware 22 of the CIC provisions in the ALAs."</p> <p>23 Did I read that correctly?</p> <p>24 A. Yes.</p> <p>25 Q. When you are referring to</p>	<p style="text-align: right;">Page 188</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. The second sentence of this 3 paragraph says: ' [REDACTED] [REDACTED] [REDACTED]</p> <p>7 Do you see that?</p> <p>8 A. Yes.</p> <p>9 Q. Okay. So do you agree then 10 that the language in this provision 11 is clear?</p> <p>12 A. Well, I think it's clear in 13 the sense of the words say what they 14 say. I'm not expressing an opinion 15 about the interpretation of these 16 words, but the words seem to be 17 clear.</p> <p>18 Q. And you wrote in your 19 report that the agreement is clear 20 and specific?</p> <p>21 A. Yes. But that's not meant 22 to be a contract interpretation 23 point.</p> <p>24 Q. There's deposition 25 testimony in this case about the due</p>
<p style="text-align: right;">Page 187</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 the ALAs, you are just talking about 3 the NuVia ALA, right?</p> <p>4 A. In this particular sentence 5 that's, I think, what I'm referring 6 to, yes, the NuVia ALA.</p> <p>7 Q. Okay. Let's look at 8 [REDACTED] again. You have the 9 contract there and the exhibit I 10 believe is QX 209.</p> <p>11 A. Yes.</p> <p>12 Q. Are you on [REDACTED]?</p> <p>13 A. Yes.</p> <p>14 Q. Is it your position that 15 the language of this position is 16 clear?</p> <p>17 MR. LLEWELLYN: Objection, 18 form.</p> <p>19 A. That sounds like a contract 20 interpretation question and I'm not 21 expressing opinions about contract 22 interpretation.</p> <p>23 Q. If you look at paragraph 54 24 of your report. Do you see that?</p> <p>25 A. Yes.</p>	<p style="text-align: right;">Page 189</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 diligence process that occurred in 3 connection with the NuVia 4 acquisition, right?</p> <p>5 A. That seems possible, yes.</p> <p>6 Q. You don't know?</p> <p>7 A. I don't recall as I sit 8 here, no.</p> <p>9 Q. There are witnesses in the 10 case that participated in due 11 diligence, right?</p> <p>12 MR. LLEWELLYN: Objection.</p> <p>13 A. I don't recall.</p> <p>14 Q. Do you have any reason to 15 doubt that there are witnesses in 16 this case who participated in due 17 diligence related to the NuVia 18 acquisition?</p> <p>19 A. No.</p> <p>20 Q. Why is it necessary to give 21 an expert opinion that due diligence 22 in an M&A transaction typically 23 involves an examination of license 24 agreements when there are witnesses 25 in this case that can just tell you</p>

ATTORNEYS EYES ONLY

ATTORNEYS EYES ONLY

<p style="text-align: right;">Page 194</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 [REDACTED] you are referring to 3 [REDACTED] of the NuVia ALA? 4 A. I think that's certainly an 5 important part, yes. It's the way 6 to enforce essentially [REDACTED] of the 7 ALA. 8 Q. So just, I'm just trying to 9 understand what you are referring to 10 with the language termination 11 provisions. Are you specifically 12 referring to [REDACTED] or are you 13 referring to [REDACTED] and [REDACTED] together? 14 A. I'm referring to [REDACTED] as an 15 enforcement mechanism for [REDACTED]. 16 Q. Got it. Will you take a 17 look at [REDACTED] in the NuVia 18 ALA, which is QX 209. 19 A. Okay. 20 Q. Have you reviewed this 21 provision before? 22 A. Yes. 23 Q. Is it your position that 24 the language of this provision is 25 clear?</p>	<p style="text-align: right;">Page 196</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 MR. LLEWELLYN: Objection to 3 form. 4 A. Again, I think that's a 5 contract interpretation question. 6 In this paragraph I'm responding to 7 a specific claim of what Professor 8 Coates says that I am saying in my 9 original report. And basically he's 10 saying that under my theory NuVia 11 has got to destroy everything that 12 it owns in terms of technology, 13 regardless of whether it comes from 14 Arm or not. And I do think it's an 15 absurd claim. I never say that in 16 my report. Professor Coates does 17 not cite any place where I say that. 18 And it wouldn't make any sense. So 19 I'm simply responding to Professor 20 Coates in this particular paragraph. 21 Q. Okay. But when you use the 22 words "plain language," are you 23 saying that you think that the 24 provision is clear? 25 A. I'm not. I'm responding to</p>
<p style="text-align: right;">Page 195</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 MR. LLEWELLYN: Objection, 3 form. 4 A. That does sound like a 5 contract interpretation question and 6 I'm not expressing opinions about 7 contract interpretation. 8 Q. If you look at paragraph 40 9 of your reply report. 10 A. Okay. 11 Q. And you go over to page 29. 12 A. Okay. 13 Q. You say: "No one is 14 claiming that upon a change in 15 control NuVia must stop using its 16 own technology that does not fall 17 within the scope of the termination 18 provisions, discontinuance and 19 destruction requirements. Instead 20 the plain language of the NuVia ALA 21 requires that it," and then you 22 describe the language. 23 In this paragraph are you 24 stating that you think this 25 provision is clear?</p>	<p style="text-align: right;">Page 197</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Professor Coates. I can read the 3 words, but the question of contract 4 interpretation is for the court to 5 determine. All I'm saying in this 6 sentence is Professor Coates says 7 that I say that you got to destroy 8 everything. And it's clear that no, 9 [REDACTED] [REDACTED] That's 11 what this provision says. So I'm 12 responding to Professor Coates's 13 absurd claim by just quoting the 14 language back to him. 15 Q. Looking at [REDACTED], is 16 there anything in this provision 17 that's unclear to you? 18 MR. LLEWELLYN: Objection to 19 form. 20 A. I'm not expressing a formal 21 opinion about the language of the 22 contract. If you want, I can try to 23 answer your question but 24 understanding that it's not part of 25 my assignment.</p>

50 (Pages 194 - 197)

ATTORNEYS EYES ONLY

<p style="text-align: right;">Page 390</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. 91. 3 A. Okay, what's the question? 4 Q. I'll just read it to you. 5 Part 3B describes "...why predicting 6 the result of a multi issue 7 negotiation is even more difficult 8 than predicting the outcome of a 9 single issue price negotiation. For 10 these reasons quantitative analysis 11 of this hypothetical would need to 12 factor in many considerations and be 13 subject to a large amount of 14 uncertainty making it difficult to 15 assess the value of the outcome in 16 dollar terms from Arm's 17 perspective."</p> <p>18 Do you see that?</p> <p>19 A. Yes.</p> <p>20 Q. What do you mean by from 21 Arm's perspective?</p> <p>22 A. I think that phrase could 23 be stricken. It's true generally. 24 It's also true from Arm's 25 perspective.</p>	<p style="text-align: right;">Page 392</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. Why does it not mean that? 3 A. Well, I said it earlier. 4 In many cases price is the most 5 important issue and so you can get a 6 pretty good estimate with some error 7 term on what the price would have 8 been but-for the breach. So for 9 example. In a freeze-out 10 transaction the controlling 11 shareholder pays X dollars per 12 share. There's other issues in a 13 typical freeze-out, but price is the 14 most important issue. And if there 15 was a deficiency in that process, a 16 court with reasonable confidence 17 could measure the magnitude of the 18 damages to the, in this case, 19 minority shareholders.</p> <p>20 Q. And in this case you don't 21 think price is the most important 22 issue in the ALAs?</p> <p>23 A. Well, when you say price, 24 there's different elements of price. 25 So I mentioned the freeze-out. In a</p>
<p style="text-align: right;">Page 391</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. Does every sophisticated 3 large business to business contract 4 involve a multi-issue negotiation?</p> <p>5 MR. LLEWELLYN: Objection to 6 form.</p> <p>7 A. Yes. I think that's fair. 8 Although the price term can be more 9 important in certain kinds of deals 10 than in other kinds of deals, but 11 it's almost never just a price 12 negotiation.</p> <p>13 Q. You say essentially in your 14 report that it's incredibly 15 difficult or impossible to predict 16 the outcome of a multi-issue 17 negotiation with certainty, right?</p> <p>18 A. Correct.</p> <p>19 Q. Does that mean that you can 20 never estimate damages in a breach 21 of contract case involving a 22 multi-issue negotiation?</p> <p>23 A. No.</p> <p>24 MR. LLEWELLYN: Objection to 25 form.</p>	<p style="text-align: right;">Page 393</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 freeze-out there is a single price 3 per share. That's a number.</p> <p>4 Q. Right.</p> <p>5 A. Here as it says in Table 1 6 there's an [REDACTED], 7 that's a price but it's payable over 8 a certain amount of time. There's a 9 royalty rate which is a variable 10 number. So unlike a freeze-out even 11 the [REDACTED] [REDACTED].</p> <p>12 Q. Do you think that those 13 [REDACTED] are the most important 14 issue in the ALA?</p> <p>15 MR. LLEWELLYN: Objection to 16 form.</p> <p>17 A. I don't know. Price is 18 certainly an important issue in most 19 negotiations, but it would require 20 technical expertise for me to know 21 whether the price was the most 22 important issue here. It seems the 23 technology, especially from the 24 NuVia perspective is just as</p>

ATTORNEYS EYES ONLY

ATTORNEYS EYES ONLY

<p style="text-align: right;">Page 398</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. Do you know if any ALA 3 licensees have taken more extreme 4 negotiation positions given 5 Qualcomm's breach? 6 A. I don't. But this point is 7 about the potential for such 8 renegotiations, which in itself is 9 an injury. 10 Q. In the sentence above this 11 list of harms which starts with the 12 words "For example," you say: "For 13 example, while the parties 14 previously were negotiating only as 15 to the benefit that would accrue to 16 Qualcomm, i.e. [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 21 And then you go on to 22 describe, you know, that now any 23 negotiation would have to consider 24 all these different harms. 25 What is the basis for your</p>	<p style="text-align: right;">Page 400</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. If all of these other 3 things that you are saying have to 4 be considered have not happened, 5 then is Arm in a different position 6 than it was in before? 7 MR. LLEWELLYN: Objection to 8 form. 9 A. Well, there's a next 10 paragraph, 93, and so those are also 11 cause to harm the overall ecosystem. 12 Those would have to be considered as 13 well. So are you saying none of 14 those happened either? 15 Q. Yeah, I'm saying if none of 16 those happened, then Arm is still in 17 the same position it was in, right? 18 A. This is what I said before. 19 I think there's a potential for 20 these things to happen and that in 21 itself is an injury. So for 22 example, an Arm licensee says I 23 don't need you to renegotiate these 24 terms but I want this other stuff 25 and I know that I could go sell</p>
<p style="text-align: right;">Page 399</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 statement that the parties were only 3 negotiating about the benefit to 4 Qualcomm? 5 A. It's not meant to be a 6 formal opinion, but clearly Qualcomm 7 was trying to get the benefit of the 8 Arm technology in the NuVia 9 applications. That is a benefit to 10 Qualcomm. 11 Q. And was there no benefit to 12 Arm that was being negotiated as 13 part of the discussions? 14 A. No. I think that's a fair 15 point. There's also a benefit to 16 Arm if that negotiation were 17 successful. I think the point of 18 this only is to say in contrast to 19 that benefit to the parties jointly 20 there's now a whole bunch of other 21 stuff that has to be considered. So 22 the reference is to the joint 23 benefit but then there's a whole 24 bunch of stuff now that would have 25 to be considered.</p>	<p style="text-align: right;">Page 401</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 myself to Qualcomm and they are just 3 going to breach the [REDACTED] [REDACTED] So here's what I want 5 from you Arm. And that threat could 6 extract concessions from Arm which 7 we would never see in a public way 8 or even in a private way for that 9 matter. 10 Q. In paragraph 94 you say: 11 "Allowing noncompliance with Arm's 12 licenses would erode authority over 13 Arm's IP." 14 [REDACTED] [REDACTED] [REDACTED] 18 A. Other than the current 19 matter? 20 Q. Are you saying the fact 21 that Arm sued Qualcomm [REDACTED] [REDACTED] 23 A. At least as regarded by 24 Arm, yes. 25 Q. Anything else?</p>

101 (Pages 398 - 401)

ATTORNEYS EYES ONLY

<p style="text-align: right;">Page 402</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 A. I think this next part is 3 critical. [REDACTED] [REDACTED] [REDACTED] So that in 8 itself would be a cost. 9 Q. You are not aware today of 10 any Arm licensees that have taken 11 note and concluded that the 12 termination provisions of their 13 agreements have no teeth, right? 14 A. I'm not aware of any such 15 evidence in part because it's 16 outside the scope, it's outside my 17 areas of expertise and I do think it 18 would be nondetectable in most 19 instances. 20 Q. You are also not aware 21 today of any licensees that have 22 followed, quoting from your 23 paragraph 94: "Followed Qualcomm's 24 behavior and bypassed Arm's 25 licensing model by acquiring other</p>	<p style="text-align: right;">Page 404</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. Okay. In paragraph 96 you 3 wrote: "It is, therefore, possible 4 that Arm would suffer reputational 5 consequences and other follow-on 6 effect related to the perception of 7 Arm's inability to enforce the very 8 terms of its licenses." 9 Same question. I 10 understand that you were saying that 11 this could happen but are you, 12 sitting here today, aware of any 13 evidence that this has happened? 14 A. I don't think your question 15 -- the answer is I have not done the 16 analysis because I'm not an expert 17 on the technology. It is forward 18 looking. It is by definition only 19 if Arm can't enforce its termination 20 provisions. And I do think the 21 reputational consequences are 22 oftentimes unobservable. 23 Q. In paragraph 97 you say: 24 "It is also possible that continued 25 noncompliance or renegotiated deal</p>
<p style="text-align: right;">Page 403</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 ALA licensees," you are not aware of 3 anyone who has done that, right? 4 A. Well, this is a forward 5 looking thing so the point is if 6 Qualcomm can get away with it, to 7 use the colloquial term, then others 8 would have these inferences out in 9 the marketplace. So this is not 10 something that could happen now but 11 could happen in the future. 12 Q. No, I understand. All of 13 the things that are listed in these 14 paragraphs in this last section are 15 about things that could happen, 16 right? I'm just asking if you are 17 aware if any of them have happened 18 since you wrote your report. 19 A. I'm not aware of these 20 things having happened because at 21 least in part this will be future 22 things in the event that Qualcomm 23 can, in fact, use Arm technology 24 without consent from Arm in NuVia 25 applications.</p>	<p style="text-align: right;">Page 405</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 could impact Arm's ventures into 3 upstream or downstream markets." 4 Do you see that? 5 A. Yes. 6 Q. Are you, sitting here 7 today, aware of whether that has 8 happened? 9 A. Same answer. 10 Q. And by same answer you mean 11 you said that this could happen, you 12 haven't done the analysis to 13 determine if it has happened? 14 A. It's three reasons. One is 15 it is outside the scope of my 16 opinions. Second reason is it 17 requires technical expertise that I 18 do not have. Third is it's forward 19 looking so by definition cannot have 20 happened to date. And fourth reason 21 is it's probably nonobservable. 22 Q. And just to clarify. Those 23 four reasons are the reasons that 24 you have not done the analysis? 25 A. Correct.</p>

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<p style="text-align: right;">Page 406</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 MR. LLEWELLYN: Objection to 3 form. 4 Q. In paragraph 98 you say: 5 "Allowing Qualcomm to ignore its 6 [REDACTED] 7 [REDACTED] could also 8 competitively disadvantage Arm's 9 partners." 10 Do you see that? 11 A. Yes. 12 Q. Are you aware that there 13 has been actual competitive 14 disadvantage to any of Arm's 15 partners? 16 A. Well, here I do cite Google 17 and Samsung worrying about that 18 issue. 19 Q. Right. But those are 20 citations from January and August of 21 2021. I'm asking if there's been 22 any harm since you wrote this 23 report? 24 A. Since I wrote the report?</p>	<p style="text-align: right;">Page 408</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 [REDACTED] 3 [REDACTED] 4 Q. The evidence that you cite 5 in paragraphs 99 and 100 is all 6 evidence from Arm personnel, right? 7 A. Correct. 8 Q. Okay. In paragraph 101 you 9 say: "All of these effects 10 represent real economic damages to 11 Arm. However, in my opinion these 12 effects would be virtually 13 impossible to quantify." 14 What do you mean by real 15 economic damages? 16 A. I don't know how to define 17 it any better than that. 18 Q. Are you saying you think 19 Arm has suffered money damages? 20 A. No. The whole point of 21 this discussion is these are 22 possible things and the point of 23 this paragraph is there's an inquiry 24 did these things materialize, which 25 is difficult, for reasons I have</p>
<p style="text-align: right;">Page 407</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 Q. Right. I know that there's 3 no harm at the time you wrote the 4 report because it's all forward 5 looking. 6 A. No, but these are 7 competitors to Qualcomm, [REDACTED] 8 [REDACTED] 9 [REDACTED] think that's 10 responsive to your question. 11 Q. Okay. So when you used the 12 word "could" in 98, it could also 13 competitively disadvantage Arm's 14 partners, what you meant was it has 15 also competitively disadvantaged 16 Arm's partners? 17 MR. LLEWELLYN: Objection to 18 form. 19 A. No. That's not what I'm 20 saying. I'm saying the word 21 "could." I'm observing that Google 22 and Samsung have said as much, but 23 I'm not a technical expert and so I 24 can't assess whether it actually</p>	<p style="text-align: right;">Page 409</p> <p>1 SUBRAMANIAN - ATTORNEY'S EYES ONLY 2 already described, to figure out 3 with any confidence. And then 4 second question even harder, okay, 5 if they materialized, what's the 6 magnitude. As I say, it's virtually 7 impossible to answer either one of 8 those questions. 9 Q. That's because all of the 10 harm is in the future? 11 MR. LLEWELLYN: Objection to 12 form. 13 A. No, it's for the four 14 reasons I said earlier. 15 Q. The four reasons you said 16 earlier were about why you didn't do 17 the analysis to determine whether 18 particular harms had occurred. So 19 my question I think is simple, which 20 is you are saying it's virtually 21 impossible to quantify. Is it 22 virtually impossible to quantify 23 because these harms have not yet 24 come to fruition? 25 A. Well, certainly that's true</p>

103 (Pages 406 - 409)

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1 2 STATE OF NEW YORK) 3) :ss 4 COUNTY OF NEW YORK) 5 6 I, GUHAN SUBRAMANIAN, the witness 7 herein, having read the foregoing 8 testimony of the pages of this 9 deposition, do hereby certify it to be a 10 true and correct transcript, subject to 11 the corrections, if any, shown on the 12 attached page. 13 14 15 GUHAN SUBRAMANIAN 16 17 18 19 Sworn and subscribed to before me, 20 this _____ day of _____, 2024. 21 22 Notary Public 23 24 25	Page 450	1 2 ----- INDEX ----- 3 WITNESS PAGE 4 GUHAN SUBRAMANIAN 5 By: Ms. Morgan 5 6 ----- EXHIBITS ----- 7 QX FOR I.D. 8 Exhibit 207, Opening Report of 18 9 Guhan Subramanian 10 Exhibit 208, Reply Report of 18 11 Guhan Subramanian 12 Exhibit 209, NuVia ALA 140 13 Exhibit 210, Dear Negotiation 220 14 Coach blog post 15 Exhibit 211, Declaration 306 16 Exhibit 212, E-mail from Gerard 339 17 Williams to Lip-Bu Tan 18 Exhibit 213, Letter 345 19 Exhibit 214, Letter 346 20 Exhibit 215, Rebuttal report of 365 21 Professor John Coates 22 23 *** EXHIBITS ATTACHED *** 24 25	Page 452
1 2 STATE OF NEW YORK) 3 ss.: 4 COUNTY OF NEW YORK) 5 6 I, ERICA L. RUGGIERI, RPR and a 7 Notary Public within and for the State 8 of New York, do hereby certify: 9 That I reported the proceedings 10 in the within-entitled matter, and 11 that the within transcript is a true 12 record of such proceedings. 13 I further certify that I am not 14 related by blood or marriage, to any 15 of the parties in this matter and 16 that I am in no way interested in the 17 outcome of this matter. 18 IN WITNESS WHEREOF, I have 19 hereunto set my hand this 9th day of 20 May, 2024. 21 22  23 ERICA L. RUGGIERI, RPR, CSR, CLR 24 25	Page 451	1 2 INSTRUCTIONS TO WITNESS 3 4 Please read your deposition over 5 carefully and make any necessary 6 corrections. You should state the reason 7 in the appropriate space on the errata 8 sheet for any corrections that are made. 9 After doing so, please sign the 10 errata sheet and date it. 11 You are signing same subject to 12 the changes you have noted on the errata 13 sheet, which will be attached to your 14 deposition. 15 It is imperative that you return 16 the original errata sheet to the deposing 17 attorney within thirty (30) days of 18 receipt of the deposition transcript by 19 you. If you fail to do so, the deposition 20 transcript may be deemed to be accurate 21 and may be used in court. 22 23 24 25	Page 453

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1
2 E R R A T A
3

4 I wish to make the following changes, for
5 the following reasons:
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24 REASON: _____

25 WITNESS' SIGNATURE DATE

EXHIBIT 12

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ARM LTD., a U.K. corporation,

Plaintiff,

v.

QUALCOMM INC., a Delaware corporation,
QUALCOMM TECHNOLOGIES, INC., a
Delaware corporation, and NUVIA, INC., a
Delaware corporation,

Defendants.

C.A. No. 22-1146-MN

**EXPERT REPORT OF RAVI DHAR
REGARDING TRADEMARK
INFRINGEMENT**

**CONTAINS HIGHLY
CONFIDENTIAL – ATTORNEYS'
EYES ONLY INFORMATION**

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I. QUALIFICATIONS

1. My name is Ravi Dhar. I am the George Rogers Clark Professor of Management and Marketing at the Yale School of Management. I am also the Director of the Yale Center for Customer Insights at the School of Management at Yale University. I also have an affiliated appointment as a Professor of Psychology at the Department of Psychology, Yale University. In addition, I serve or have served on the editorial board of peer-reviewed consumer research journals such as the Journal of Consumer Psychology, Journal of Consumer Research, and Journal of Marketing and Marketing Letters. Previously, I was the Associate Editor of Journal of Marketing Research, the past Area Editor of Marketing Science, and the Associate Editor of Journal of Consumer Research. My academic work focuses on branding, consumer behavior, consumer psychology, marketing management, marketing strategy, survey design, methodology, and evaluation.

2. My teaching responsibilities at Yale University's School of Management include two doctoral courses that examine advanced research topics in marketing. I also teach or have taught several different courses for graduate students who are enrolled in the MBA program or the Executive MBA program at Yale: Consumer Behavior, E-Business and Marketing, Marketing Strategy, Marketing Management, Marketing of Financial Services, and Strategic Marketing Leadership: The Role of A CMO. I have also taught and given seminars to mid-level and senior-level executives in more than a dozen countries in North and South America, Asia, and Europe.

3. I hold a Ph.D. and Master of Science in Business Administration from the University of California at Berkeley. I have published more than 85 papers in journals, proceedings, and as book chapters, including leading marketing, psychology, and management journals, such as the Harvard Business Review, Journal of Behavioral Decision Making, Journal

of Business, Journal of Consumer Psychology, Journal of Consumer Research, Journal of Marketing Research, Journal of Personality and Social Psychology, Management Science, Marketing Science, Nature Climate Change, Organizational Behavior and Human Decision Processes, Sloan Management Review, and other peer-reviewed and industry journals.

4. Several of my publications were also considered for research awards such as the Paul E. Green Award (“The Effect of Forced Choice on Choice,” Finalist in 2004) and the William O’Dell Award (“Consumer Choice Between Hedonic and Utilitarian Goods,” Winner in 2005; “Making Complementary Choices in Consumption Episodes: Highlighting Versus Balancing,” Finalist in 2004; “The Effect of Forced Choice on Choice,” Finalist in 2008 and “Preference Fluency in Choice,” Finalist in 2012). The William O’Dell Award is presented to the Journal of Marketing Research article that has made the most significant, long-term contribution to marketing theory, methodology, and/or practice. The Paul E. Green Award is presented to the Journal of Marketing Research article that shows or demonstrates the most potential to contribute significantly to the practice of marketing research. I have been awarded the 2012 Distinguished Scientific Accomplishment Award from the Society of Consumer Psychologists, which is given annually to honor a scholar who has made significant and lasting contributions in the field of consumer psychology. A study of 475 marketing faculty members at top 30 schools (as of spring 2017), ranked me as one of the four most productive marketing faculty members (among those with at least one publication per year in one of the four top marketing journals over the 10-year period between 2007 and 2016), tying for rank 2 through 4 with two other faculty.¹ A detailed listing of my educational background and publications is set forth in my curriculum vitae, which is attached to the end of this report as **Exhibit A**.

¹ Van Osselaer, Stijn M. J., and Sarah Lim, “Research Productivity of Faculty at 30 Leading Marketing Departments,” Marketing Letters, (2019): 1-48, at pp. 1-3, 8 (Table 3).

5. My fields of expertise are branding, consumer and customer psychology, marketing management, marketing strategy and survey design, methodology, and evaluation. My current research focuses on various aspects of marketing and branding, including consumers' decision-making, the manner in which consumers acquire and process information when forming product perception and preferences, the effect of product attributes (including trademarks) and information presentation on consumer purchase and consumption decisions and the effect of different "marketing mix" activities (such as promotions and advertising) on consumer purchase decisions.

6. I have served as an expert witness for both claimants and defendants on marketing research issues in a variety of litigation matters. A list of recent cases in which I have testified as an expert witness at trial or by deposition in at least the past four years is attached as **Exhibit B**.

II. ASSIGNMENT

7. I have been engaged by Morrison and Foerster LLP, on behalf of Plaintiff Arm Ltd. ("Arm") to opine on certain issues related to U.S. Registration Nos. 5,692,669 ("669 Trademark") and 5,692,670 ("670 Trademark") (collectively, "Arm Trademarks" or "Arm Marks") and Arm's claims against Defendants Qualcomm Inc., Qualcomm Technologies, inc. (collectively "Qualcomm") and Nuvia, Inc. ("Nuvia").

8. It is my understanding that Arm has filed this lawsuit against Defendants for breach of contract, trademark infringement, and false designation of origin.²

9. In this case, I was asked to opine, from a marketing and consumer behavior perspective, on the following issues:

- a. The benefit of a strong mark or brand in the marketplace;

² Complaint. *Arm Ltd. v. Qualcomm Inc., Qualcomm Technologies, Inc., and Nuvia, Inc.* (D. Del. No. 1:22-cv-01146) (Aug. 31, 2022) ("Complaint") ¶¶ 1-3.

- b. Whether Arm's Trademarks and brand are distinctive and strong in the United States marketplace context;
- c. Whether Qualcomm's unlicensed use of the Arm Trademarks in connection with "Nuvia Products," i.e., technology that encompasses Nuvia technology developed under now terminated Nuvia-Arm ALA³—[REDACTED]
[REDACTED]
[REDACTED]⁴—would likely result in confusion (i.e., whether Qualcomm's use of the ARM Marks is likely to cause purchasers of these products to falsely believe that there is some common ownership, affiliation with, connection to, or association with the Arm Trademarks, as to the origin, sponsorship, or approval of the Plaintiff, including whether such products have been validated by Arm);
- d. Whether Qualcomm's use of the Arm Trademarks is likely to cause harm by impacting the brand or result in loss of sales by Arm and Arm's licensees that serve the same market.

III. RELEVANT LEGAL STANDARDS

10. I have been informed of general legal principles relevant to my opinions in this matter. I have used these legal principles in forming my opinions.

11. I have been informed that, to prove infringement of a trademark, it must be shown that (1) Arm owns a valid, protectable trademark, and (2) Defendants' use of the mark is likely to cause confusion.

³ For purposes of this report, I will refer to these products as "Nuvia Products." I understand that Nuvia developed the Phoenix core, a custom central processing unit ("CPU") core based on the Arm architecture, under its ALA. Tyson, Mark. "Nuvia 'Clean-Sheet CPU Design' Performance Previewed." *Hexus* (Aug 11, 2020). <<https://hexus.net/tech/news/cpu/144733-nuvia-clean-sheet-cpu-design-performance-previewed>>; [REDACTED]

⁴

[REDACTED] *see ¶ 62.*

IV. MATERIALS CONSIDERED

12. In forming my opinions, I drew on my knowledge, education, and experience in marketing and branding developed over the past several decades. I reviewed case-specific materials provided to me by counsel, as well as other documents discussed in this report. The materials that I relied upon include those cited in this report and the materials disclosed in **Exhibit C** to this report.

V. SUMMARY OF OPINIONS

13. Based on my knowledge and experience, well-established principles of branding, my analysis of documents and testimony provided to me by counsel and cited herein, and my own independent research, my conclusions are as follows:

- Arm's brand and Trademarks are strong and confer value in the marketplace.
- Strong customer acceptance of Arm's technology and Arm licensed products signifies a high standard of quality and innovation associated with Arm's Trademark that Arm has built over decades.
- Arm's Trademarks also signify compliance with the Arm Instruction Set Architecture ("ISA") and, in the case of technology developed under an ALA license, verification, and validation in accordance with the applicable provisions in the relevant license Annex.

14. Qualcomm's prior history and usage of Arm's Trademarks, along with requirements in the relevant agreements and materials that it will provide to customers, demonstrate a high likelihood that Qualcomm will continue to use Arm's Trademarks in connection with its future products, particularly Nuvia Products.

15. I also understand from the materials I reviewed that Qualcomm has used Arm's Trademarks in connection with its future Nuvia Products at least as recently as the Qualcomm

Snapdragon Summit, press releases, its earning calls, and other public statements, all within the past year. Qualcomm's use of Arm's Trademarks is likely to cause customer confusion. Thus, Qualcomm's unauthorized use of the Arm Mark for Nuvia Products is likely to mislead customers and other relevant industry participants into believing that there is some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm. By using the Arm Mark in connection with the Nuvia Products, Qualcomm would benefit from the positive and favorable associations with the Arm Mark.

16. This unauthorized use is also likely to cause harm to Arm. First, Qualcomm's use of Arm's Trademarks may result in loss of control to Arm of its brand and goodwill, by falsely associating the Nuvia Products with Arm's brand. Second, Qualcomm's sale of the Nuvia Products may divert customers away from Arm, who may select a Nuvia Product rather than an Arm product or an Arm licensed product, understanding mistakenly that they are interchangeable.

17. The opinions I express in this report are based on my background and experience, along with my review of materials provided to me by counsel, and of research that I carried out in relation to this engagement. If called to testify, I expect to offer the opinions expressed in this report and the basis for those opinions.

18. My analyses and opinions in this report are based on information available to me as of the date of this report. I reserve the right to modify or supplement my testimony and this report in response to any further information provided by the parties and/or in light of additional documents or testimony brought forth through the ongoing discovery in this case, at trial, or otherwise, which may be brought to my attention after the date of my signature below. I reserve the right to modify or supplement my opinions in view of arguments made by any person

retained by Qualcomm, including Qualcomm's counsel and anyone it engages to provide opinions.

19. I am being compensated at the rate of \$950 per hour for my services. The compensation is in no way tied to the outcome of this matter or my opinion.

VI. BACKGROUND

A. ARM COMPANY BACKGROUND

20. Arm is a world leader in its industry, developing processor architectures, including instruction set architectures, and processor core designs implementing those architectures. “Arm’s CPU technology has been an industry leader for many years and continues to be the most widely deployed architecture globally.” Arm’s CPU architecture “has resulted in the proliferation and evolution of computers as people know them today. [By enabling] the mobile phone and smartphone revolution, and through [its] focus on energy efficiency and [its] history of continuous innovation, [Arm has] enabled new categories of ‘smart’ consumer electronics.”⁵

21. “Software developers write software for Arm-based devices because it offers the biggest market for their products, and chip designers choose Arm processors because they have the broadest support of software applications.”⁶

22. “In the fiscal year ended March 31, 2023, more than 260 companies reported that they had shipped Arm-based chips, and...approximately 70% of the world’s population uses Arm-based products.”⁷

⁵ ARM_01259705 – 0105 at -9720, -9792.

⁶ Arm SEC Form 424B4 (September 13, 2023) <<https://www.sec.gov/Archives/edgar/data/1973239/000119312523235320/d550931d424b4.htm>> at 2.

⁷ ARM_01259705 – 0105 at -9792.

23. I understand from the materials I considered that processor cores are the parts of a computer’s Central Processing Unit, or “CPU,” that read and execute program instructions to perform specific actions. Modern CPUs frequently integrate multiple processor cores on a single semiconductor chip or integrated circuit (“IC”), and they are often referred to as “system on chip” or “SoC” devices.⁸

24. CPUs are used in a variety of industries or market segments, including personal computing, mobile, cloud computing, automotive, artificial intelligence, Internet of Things (“IoT”), servers, data centers, and in effectively every other industry that utilizes computing devices.⁹

25. Technology companies around the world use Arm processor technologies in products ranging from smartphones to servers.¹⁰

26. Since Arm was founded in 1990, it has made significant investments to develop and market its products.¹¹ In the mid-1990s Arm CPUs gained significant traction in the mobile market because of the processors’ power efficiency and performance.¹² Arm’s more recent investments have focused on making it a “ubiquitous provider of compute technology in all market segments.”¹³ Arm is also focused on expanding into new markets via developing

⁸ “Licensing Arm Technology: Access for Everyone.” *Arm*. <<https://www.arm.com/products/licensing>>; “The ARM Processor Business Model.” *Arm*. <<https://developer.arm.com/documentation/dht0001/a/architectures--processors--and-devices/the-arm-processor-business-model>>.

⁹ See, e.g., “Partner Ecosystem Catalog.” *Arm* <<https://www.arm.com/partners/catalog/results#sort=date%20descending&numberofResults=12>>; “CPU Architecture.” *Arm*. <<https://www.arm.com/architecture/cpu>>.

¹⁰ “Partner Ecosystem Catalog.” *Arm* <<https://www.arm.com/partners>>; Deposition of Paul Williamson, November 9, 2023, p. 279; ARM_01259705 – 105 at -9713.

¹¹ ARM_01259705 – 0105 at 9714.

¹² *Id.*

¹³ *Id.*

multiple product families optimized for specific markets such as smartphones, cloud computing, networking, automotive, and IoT.¹⁴

27. I understand from the materials I considered that Arm's processors and business models offer unique customer benefits. "Arm's flexible and modular design IP enables customers to build chips optimized for the PPA requirements for a specific use case or end market... By developing a wide range of CPU and related technologies, Arm can provide a CPU optimized for various use cases to reduce both energy consumption and area (with area being a key driver of the ultimate cost of a chip)."¹⁵

28. Arm's position in the industry allows it to provide unique value to its customers: "To further reduce our customers' costs and to help de-risk their product development efforts, we combine our CPU products and SoC knowledge with our deep understanding of our ecosystem partners' design tools and manufacturing processes to provide processor products that not only optimize for power and performance, but also accelerate time to market for our customers."¹⁶

B. ARM TRADEMARK BACKGROUND

29. Arm owns intellectual property relating to its processor architectures and designs, including, among other things, trademarks.¹⁷

30. Arm owns U.S. Registration Nos. 5,692,669 and 5,692,670 for the ARM word mark in standard characters and the stylized ARM mark featuring the word "arm" in all lower-case letters (collectively, the "Arm Trademarks" or "ARM Marks"), as pictured below:

¹⁴ *Id.*

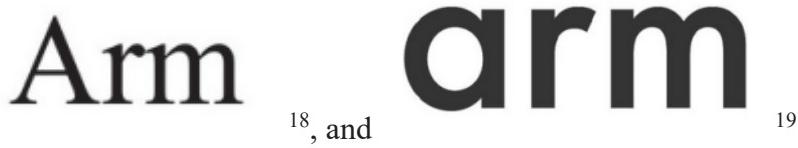
¹⁵ Arm SEC Form 424B4 (September 13, 2023)

<<https://www.sec.gov/Archives/edgar/data/1973239/000119312523235320/d550931d424b4.htm>> at 6.

¹⁶ Arm SEC Form 424B4 (September 13, 2023)

<<https://www.sec.gov/Archives/edgar/data/1973239/000119312523235320/d550931d424b4.htm>> at 6.

¹⁷ "Terms and Policies – Trademarks." *Arm*. <<https://www.arm.com/company/policies/trademarks>>; Deposition of Will Abbey, October 27, 2023, p. 324.



¹⁸, and

¹⁹

31. These marks are registered for “[e]lectronic data processing equipment,’ ‘integrated circuits,’ ‘semiconductors,’ ‘microprocessors,’ ‘RISC-based instruction set architectures, namely, software instructions designed to function with particular microprocessors,’ ‘data processors,’ ‘printed circuit boards,’ ‘electronic circuit boards,’ and related ‘[r]esearch, development and design,’” among numerous other goods and services. The applications to register ARM Marks were filed on July 31, 2017 and were issued on March 5, 2019. The application for Registration No. 5,692,669 has a claimed first use and first use-in-commerce date of November 30, 1990, while the application for Registration No. 5,692,670 has a claimed first use and first use-in-commerce date of August 1, 2017.²⁰

C. ARM ARCHITECTURE LICENSING SCHEME

1. Arm’s Licensing Ecosystem

32. Arm does not manufacture chips itself but instead licenses its processor technology to companies making chips and other electronic devices.²¹ Arm licenses its processor technologies under Arm licenses such as architecture license agreements (“ALAs”) and technology license agreements (“TLAs”).²²

¹⁸ U.S. Registration No. 5,692,669.

¹⁹ U.S. Registration No. 5,692,670.

²⁰ Complaint, ¶ 71.

²¹ “The ARM Processor Business Model.” *Arm*. <<https://developer.arm.com/documentation/dht0001/a/architectures-processors--and-devices/the-arm-processor-business-model>>.

²² Complaint ¶ 17. See also ARM_01259705 – 105 at -9794; Deposition of Simon Segars, November 16, 2023, pp. 29 – 30; Nuvia TLA, ARM_00059183 – 199.

33. Arm's TLAs allow for licensees to use specific "off-the-shelf" Arm processor core designs with only minor modifications.²³

34. Arm provides support for licensees in developing Arm-compliant products under their TLA license.²⁴ In return, licensees provide royalty payments for Arm, and the royalty fees depend on the technology developed under the TLA.²⁵

35. Arm's ALA licenses provide a licensee with greater rights and more flexibility. ALAs allow the licensee to design custom processor cores based on Arm's architectures, using Arm Technology and Arm Confidential Information.²⁶

36. [REDACTED]

[REDACTED]

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

²⁶ Deposition of Simon Segars, November 16, 2023, 30:12-32:12; Deposition of Will Abbey, October 27, 2023, 76:11-77:20.

39. [REDACTED]

[REDACTED]

[REDACTED] 28

40. The support and maintenance that Arm provides to its customers offers value that affords customers the ability to develop and innovate with Arm's support: "Our solution allows customers to build optimized chips, while reducing their design execution risk and their internal development costs...We invest significant time, resources and effort in the design and verification of each processor and work closely with our partners to ensure a standard of excellence in the processor products we deliver to our customers."²⁹

41. Each TLA or ALA license agreement is negotiated separately with individual customers based on the licensee's intended use of Arm's Technology and Confidential Information.³⁰

42. Thus, Arm's business operates on an extensive licensing ecosystem. Arm engineers design processor core architecture, which Arm licenses to downstream customers who

[REDACTED]
[REDACTED]

²⁹ Arm SEC Form 424B4 (September 13, 2023)

<<https://www.sec.gov/Archives/edgar/data/1973239/000119312523235320/d550931d424b4.htm>> at 6.

³⁰ See Shimpi, Anand Lal. "The ARM Diaries, Part 1: How ARM's Business Model Works." *AnandTech* (June 28, 2013). <<https://www.anandtech.com/show/7112/the-arm-diaries-part-1-how-arms-business-model-works>>.

use that technology for semiconductors. Arm's licensing ecosystem is well-established, widespread, and is based on the use of underlying Arm Technology, Arm Confidential Information, and derivatives or embodiments thereof.³¹

43. Arm has a significant licensing ecosystem, "with more than 30 billion Arm-based chips reported as shipped in the fiscal year ending March 31, 2023 alone, representing an approximately 70% increase since the fiscal year ended March 31, 2016."³²

44. Arm reports that "based on royalty revenue information provided to us by customers in quarterly royalty reports, approximately 46% of [Arm's] royalty revenue for the fiscal year ended March 31, 2023 came from products released between 1990 to 2012."³³

45. "For the calendar year ended December 31, 2022," Arm estimates that its total addressable market "was approximately \$202.5 billion" and predicted "[it] will grow at a 6.8% compound annual growth rate ('CAGR') to approximately \$246.6 billion by the end of the calendar year ending December 31, 2025."³⁴

46. The continued existence and success of this licensing system depends on Arm's trust in and relationships with its partners. As Paul Williamson (Senior Vice President and General Manager of Client Line of Business at Arm) testified:

"... ARM's business is fundamentally defined by our ability to protect and license our technology.

[REDACTED]. So I think it brings

³¹ ARM_01236577 – 579.

³² ARM_01259705 – 0105 at -9792.

³³ ARM_01259705 – 0105 at -9794.

³⁴ Arm SEC Form 424B4 (September 13, 2023)

<<https://www.sec.gov/Archives/edgar/data/1973239/000119312523235320/d550931d424b4.htm>> at 7.

[REDACTED] to ARM, [REDACTED]
[REDACTED], but as I said that is not
the [REDACTED] it provides, but it is [REDACTED].”³⁵

47. In addition, the continued existence and success of Arm’s licensing system depends on the substantial investment Arm makes in its research and development, technological innovation, and support it provides to its customers under its license agreements. As Arm explained in its second amended F-1 filing:

“We will have to make significant expenditures to continue developing our semiconductor products and other products. The long development time of generally five or more years from the initial design of our semiconductor products until its incorporation into new end-user applications can place significant strain on our financial resources and personnel...To remain competitive, we must continue to develop new products, applications, and enhancements to our existing products and services, particularly as next generation technology is adopted by market participants. Allocating and maintaining adequate research and development resources, such as the appropriate personnel and development technology, to meet the evolving demands of the market is essential to our continued success.”³⁶

2. Licensing Rights to Arm Trademarks

48. An Arm TLA or ALA provides a license to use Arm’s Trademarks in connection with a licensee’s Arm-compliant products that a licensee developed under a specific TLA or

³⁵ Deposition of Paul Williamson, November 9, 2023, pp. 244 – 245

³⁶ ARM_01259705 – 0105 at -9739, -9745

ALA. A licensee's right to use Arm's Trademarks is specifically limited to products developed under their license.³⁷

49. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

50. [REDACTED]

[REDACTED]

[REDACTED]

51. I understand from the materials I considered that Arm provides guidelines governing how a licensee may use the Arm Trademarks in connection with licensed products. Arm publishes Arm Branding Guidelines that all its licensees must follow. I also understand that the Branding Guidelines set forth instances under the ALAs and TLAs where a licensee is required to display an Arm Trademark, and other instances where the licensee is permitted, but not required, to display an Arm Trademark.⁴⁰

52. Arm's Trademark Guidelines instruct that an Arm licensee with an ALA with Arm [REDACTED] in a few instances: [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] and [REDACTED]

[REDACTED]

³⁷ Deposition of Jonathan Armstrong, December 8, 2023, 62:5-10.

³⁸ ARM_00059183 – 199 at -9187.

³⁹ ARM_00044650 – 692 at -4656.

⁴⁰ See “Arm Branding Guidelines. *Arm*. <<https://www.arm.com/company/policies/trademarks/guidelines-brand>>.

[REDACTED]
[REDACTED] An ALA partner is also permitted [REDACTED]

.⁴¹

53. The term [REDACTED] is defined in the licensee's ALA. For example, in Qualcomm's ALA, Section [REDACTED], it defines [REDACTED] as [REDACTED]

[REDACTED]
[REDACTED]

54. Arm outlines the terms and policies associated with using the Arm Trademark. A licensee may only use [REDACTED] like [REDACTED] or [REDACTED].³

55. Companies will negotiate the use of these terms with Arm. For example, as Jonathan Armstrong, Head of Brand and Creative Services at Arm, testified, for [REDACTED] like [REDACTED]

Mr. Armstrong further testified that if an unlicensed third party uses a phrase like [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]⁴⁵

56. Mr. Armstrong answered affirmatively that [REDACTED] under [REDACTED]

⁴¹ "Arm Branding Guidelines. *Arm*. <<https://www.arm.com/company/policies/trademarks/guidelines-brand>>.

⁴² Qualcomm ALA (ARM_00044650) § 1.2.

⁴³ "Arm Branding Guidelines. *Arm*. <<https://www.arm.com/company/policies/trademarks/guidelines-brand>>.

⁴⁴ Deposition of Jonathan Armstrong, December 8, 2023, 75:14-18; *see also*, *id.*, 80:11-15.

⁴⁵ Deposition of Jonathan Armstrong, December 8, 2023, 78:10-18.

[REDACTED] to Arm's products, services, or related technologies.”⁴⁶

57. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

D. QUALCOMM

1. Company Background

58. Qualcomm is a wireless technology company that develops various products, including semiconductors, designed to “deliver intelligent computing and advanced connectivity in mobile devices and other products.”⁴⁹

59. [REDACTED]

[REDACTED]

2. Qualcomm’s Architecture License Agreement

60. [REDACTED]

[REDACTED]
[REDACTED]

⁴⁶ Deposition of Jonathan Armstrong, December 8, 2023, 126:11-20.

⁴⁹ Qualcomm Form 10-K for FYE 2023, at 6.

⁵⁰ See ARM_00044650.

⁵¹ See ARM_00060458.

⁵² ARM_00044650.

61. [REDACTED]

[REDACTED]

[REDACTED]

62. I understand that Arm's position is that the [REDACTED] and related SoCs are not licensed under Qualcomm's ALA because such technology was not developed under that ALA, and, because the Nuvia ALA was terminated, these products are no longer licensed under the Nuvia ALA.⁵⁴ For purposes of this report, I assume that Arm is correct and that [REDACTED] [REDACTED] and related cores and SoCs are not licensed.

E. **NUVIA**

1. **Company Background**

63. Nuvia was founded as a start-up in 2019 by engineers who left Apple and Google and planned to design energy-efficient CPUs for data center servers based on a custom processor implementing the Arm architecture.⁵⁵

64. In August 2020, Nuvia announced that their first-generation CPU code-named "Phoenix" would be "a custom core based on the ARM architecture."⁵⁶ Nuvia also announced that benchmark tests showed Phoenix could outperform rival products from Apple, Intel, AMD, and Qualcomm.⁵⁷

⁵³ ARM_00044650 at -656.

⁵⁴ Answer and Affirmative Defenses to Defendant's Amended Counterclaim, dated November 15, 2022.

⁵⁵ Complaint ¶ 20.

⁵⁶ Complaint ¶ 24; John Bruno & Sriram Dixit, "Performance Delivered a New Way, Silicon Reimagined" *Medium*. (Aug. 11, 2020) <<https://medium.com/silicon-reimagined/performance-delivered-a-new-way-8f0f5ed283d5>>

⁵⁷ *Id.*

2. Nuvia's Architecture License Agreement

65. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

68. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

⁵⁸ Complaint ¶ 21; ARM_00002956 – 71; ARM_00002988 – 3002.

⁵⁹ ARM_00002956 – 71 at -2959.

⁶⁰ ARM_00002956 – 71 at -2969.

⁶¹ Complaint ¶ 28.

⁶² ARM_00002956 – 71 at -2968.

⁶³ *Id.*

[REDACTED]

[REDACTED]

69. From September 2019 through early 2021, Nuvia worked to develop a customer processor core based on Arm architecture.⁶⁴ Arm provided documents, support, etc. to Nuvia to assist Nuvia's efforts to deliver an Arm-based core for the server market.⁶⁵

F. QUALCOMM'S PLANS FOR NUVIA TECHNOLOGY

70. Although Qualcomm has its own ALA license with Arm, I understand that prior to acquiring Nuvia, Qualcomm had not recently developed any commercial product based on its own custom core.⁶⁶

71. In early 2021, Qualcomm acquired Nuvia for \$1.4 billion.⁶⁷ Qualcomm announced that it intended to integrate Nuvia's [REDACTED] CPU "across a wide portfolio of products" including Qualcomm Snapdragon platforms, which Qualcomm expected to "sample in the second half of 2022."⁶⁸

72. [REDACTED]

[REDACTED]

[REDACTED]

73. Qualcomm then continued to develop the [REDACTED] as well as several SoC products incorporating the [REDACTED] including products [REDACTED],

⁶⁴ Complaint ¶ 23.

⁶⁵ *Id.*

⁶⁶ Complaint ¶ 26.

⁶⁷ "Qualcomm Completes Acquisition of NUVIA." *Qualcomm*. (March 15, 2021) <[https://qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia#:~:text=Qualcomm%20Incorporated%20\(NASDAQ%3A%20QCOM\),working%20capital%20and%20other%20adjustments>](https://qualcomm.com/news/releases/2021/03/qualcomm-completes-acquisition-nuvia#:~:text=Qualcomm%20Incorporated%20(NASDAQ%3A%20QCOM),working%20capital%20and%20other%20adjustments>) (ARM_00024809).

⁶⁸ *Id.*

⁶⁹ ARM_00032602 (1/27/2021 letter from Z. Asghar to P. Williamson).

[REDACTED]

[REDACTED]

74. Since the acquisition, Qualcomm has made numerous statements, both internally and publicly, regarding its plans to release Nuvia Products incorporating the Nuvia-based technology soon, as detailed below.

75. As early as November 2022, Qualcomm announced that its “Oryon” CPU would “be integrated across a wide portfolio of Snapdragon powered products starting with PCs and including smartphones, digital cockpits, Advanced Driver Assistance Systems, extended reality, and infrastructure networking solutions.”⁷²

76. At Qualcomm’s recent 2023 Snapdragon Summit Qualcomm previewed its Snapdragon X Elite SoC, that is reported by AnandTech to be “[b]ased on brand-new Arm CPU core design from their Nuvia subsidiary dubbed ‘Oryon.’”⁷³ While the Snapdragon X Elite SoC will initially be used in laptop computers, Qualcomm has already announced plans to incorporate the SoC into smartphones and other devices.⁷⁴

77. In his deposition, [REDACTED]

[REDACTED]

⁷⁰ Complaint ¶¶ 43-53; Deposition of Gerard Williams, November 3, 2023, 179:1-6 (testifying that after the acquisition, the former Nuvia team continued work on Nuvia’s Phoenix core); *see also* ARM_01238999 (5/18/2022 email from R. Grisenthwaite); QCARM 02417783 (1/19/2022 message from Z. Asghar to M. Gulati [REDACTED]).

⁷¹ See 11/17/2023 Arm’s First Supplemental Responses to Qualcomm’s Interrogatory Nos. 6, 20.

⁷² “Qualcomm Oryon CPU: a custom CPU at the center of next-generation premium experiences on Snapdragon platforms.” *Qualcomm*. (November 16, 2022) <<https://www.qualcomm.com/news/onq/2022/11/qualcomm-oryon-custom-cpu-at-center-of-next-gen-premium-experiences-on-snapdragon-platforms>>.

⁷³ Smith, Ryan. “Qualcomm Previews Snapdragon X Elite SoC: Oryon CPU Starts in Laptops.” *AnandTech*. (October 24, 2023) <<https://www.anandtech.com/show/21105/qualcomm-previews-snapdragon-x-elite-soc-oryon-cpu-starts-in-laptops->>>.

⁷⁴ *Id.*

⁷⁵ [REDACTED]

VII. ARM BRANDING

78. I use the term Arm brand to refer to the ARM Marks as seen in the marketplace. It is my opinion that the Arm brand is and has long been distinctive and strong. In the following sections, I first discuss the concepts and benefits of a strong brand. I then discuss the components of brand identity and what makes a strong brand. Finally, I apply these principles to the Business to Business (“B2B”) market in which Arm competes and discuss the strength and distinctiveness of the Arm brand in the B2B marketplace context.

A. THE CONCEPT AND BENEFITS OF A BRAND

79. A brand is more than a trademark (e.g., a name or a symbol or a design).⁷⁶ It includes several tangible brand elements (e.g., words, logos, colors, designs, imagery) and intangible brand elements (emotional, attitudinal, sensory) that, collectively, stand for a unique source and a promise of certain benefits to prospective customers. However, a trademark is an important element of a company’s brand.

80. Strong brands are valued because they can impact consumer purchase behavior. Consumers in the marketplace rely on brands to make effective and efficient purchasing decisions. First, the brand name or other brand identity elements allows consumers to quickly identify the source of a product or service, or its sponsor. This confers systematic advantages to a strong brand in the marketplace.

81. Second, a brand name and other brand identity elements take on meaning to customers based on repeated experience with the brand as well as from its advertising/promotional efforts and profile in the media. For example, the Arm brand is not only

⁷⁶ See generally, e.g., Kevin Lane Keller, Strategic Brand Management: Building, Measuring and Managing Brand Equity, (4th Ed., Pearson 2012); David A. Aaker, Managing Brand Equity: Capitalizing on the Value of a Brand Name, (Free Press 1991).

strong and recognized in the microprocessor industry, it has also likely taken on a specific meaning around intangible attributes, such as high performance, and also signals compliance with the Arm Instruction Set Architecture.⁷⁷ It is this positive meaning of the brand among Arm's target customer base that leads to increased customer preference and loyalty.

82. Third, brands also serve to reduce the risk associated with product purchase decisions. Customers may perceive different types of risks in buying a product, such as functional risk (e.g., the product does not perform to expectations), financial risk (e.g., the price) or social risk (e.g., the product is not appreciated by others). Thus, a well-known brand can help reduce the risk associated with the purchase or trial of a new variety that is linked to a familiar and trusted mark.

83. Co-branding or composite branding strategy involves combining two or more existing brand names to create a brand name for a new product. Ingredient branding refers to a type of co-branding or a process in which a company markets an established branded ingredient or component used in its own products. Companies will often enter partnerships so that they can leverage the power of the ingredient brand to their mutual benefit.⁷⁸ The overall marketing strategy seeks to signal the benefits built on the strong and favorable brand identity of the ingredient (e.g., Arm in this case).

84. In the next section, I describe the key elements of a strong brand measured by brand knowledge, including brand performance and brand imagery.

⁷⁷ Deposition of Jonathan Armstrong, December 8, 2023, 82:20 – 83:8; 112:4-9.

⁷⁸ Composite Branding Alliances: An Investigation of Extension and Feedback Effects, C. W. Park, Sung Youl Jun, and Allan Shockner, Journal of Marketing Research, 1996.

B. THE COMPONENTS OF A STRONG AND DISTINCTIVE BRAND IDENTITY

85. As stated above, the commercial strength of a brand lies in what customers in the marketplace have learned, felt, seen, and heard about the brand because of their direct or indirect experiences over time. Thus, a strong and distinctive brand is built so that the desired thoughts, feelings, images, and perceptions become linked to the brand.

86. Because brand knowledge is the key to creating a strong brand from the consumer viewpoint, it is important to understand how brand knowledge is stored in memory. There are many different models of memory, and a well-established model is the associative network model of memory. According to this model, memory consists of a network of nodes and connecting links, in which nodes represent stored information or concepts, and links represent the strength of association between such information or concepts.⁷⁹ The information can be verbal, visual, abstract, or contextual in nature.⁸⁰

87. Consistent with the associative network memory model, brand knowledge is conceptualized as consisting of a brand node in memory with a variety of associations linked to it. In particular, brand knowledge or the strength of a brand can be characterized in terms of two components: brand awareness and brand image.

- **Brand awareness** is related to the strength of the brand node in memory, as reflected by consumers' ability to identify the brand under different conditions.
- **Brand image** is perceptions about a brand as reflected by the brand associations held in consumer memory.

⁷⁹ See Kevin Lane Keller, Strategic Brand Management: Building, Measuring and Managing Brand Equity, (4th Ed., Pearson 2012).

⁸⁰ See, e.g., Kevin Lane Keller, Conceptualizing, Measuring and Managing Customer-Based Brand Equity, J. Marketing 57(1):1-22 (1993).

- A strong brand tends to have both (a) strong awareness of identification of the mark with particular goods or services, and (b) strong brand image in memory in terms of the strength, favorability, and uniqueness of the brand associations.⁸¹ Length of use, advertising/promotional efforts, exposure to the brand including its mentions as an ingredient of the product by the licensee and media are important factors in establishing brand awareness and a brand image and, thus, brand knowledge.
- Brand associations refer to the other informational nodes linked to the brand node in memory and contain the meaning of the brand for consumers. As discussed, next, these associations can be in all forms and refer to the characteristics of the product or aspects independent of the product.

88. The brand associations can be related to the **performance** of the brand. For example, performance-related associations can be about the quality or reliability provided by the Arm brand. The Arm Marks signal to consumers and to the public that the product is licensed and has been verified and validated by Arm as compliant with Arm's architecture.

89. The brand associations can also be about the **imagery** of the brand, or the way in which the brand is linked to its customers' psychological or emotional needs.

90. Like brand performance associations, imagery associations can be formed directly from a customer's own experience and contact with the brand or indirectly as communicated in brand advertising/promotional materials, directly as well as by ingredient branding.

91. Based on the brand imagery (how people think about the brand), brands also take on personality traits (how people feel about the brand). An important objective of building a

⁸¹ See Kevin Lane Keller, Strategic Brand Management: Building, Measuring and Managing Brand Equity, (4th Ed., Pearson 2013).

strong brand is to create a personality for the brand that is attractive to the target and product market.

92. The key to building a strong brand identity comes from the specific associations related to either performance or to imagery that become linked to the brand identity. A brand's associations and meaning that are strong, favorable, and unique provide the underpinning of building strong brand equity that provides benefit to the brand owner.

VIII. ARM HAS BUILT A STRONG BUSINESS-TO-BUSINESS (“B2B”) BRAND

A. B2B COMPANIES

93. Whether a company sells products or services to consumers, Business to Consumers (“B2C”) or to other businesses, B2B, a strong brand is among its most important and sustainable assets.⁸² Brands can facilitate the identification of products and business, differentiate them from their competition, communicate the value and benefits of a product or service, and reduce the risk and complexity involved in the buying decision.⁸³ These functions are common to both B2C and B2B brands, although the relative importance of each function varies between the two, with risk reduction cited as the most important function of B2B brands and signaling value as the most important for B2C.⁸⁴

94. Numerous studies have established the importance of branding in B2B markets.⁸⁵ The benefits of a brand are built on the associations the brand has in the perceptions of the

⁸² Balmer, J. M. T., et al., (2020), “The role of corporate brand image for B2B relationships of logistics service providers in China,” Journal of Business Research, 117C, 850–861; Keller, K. L. (2013), Strategic Brand Management, Fourth/Global Edition, Essex: Pearson (“Keller (2013)”), p. 34; Iyer, P., et al. (2019), “Market orientation, positioning strategy and brand performance,” Industrial Marketing Management, 81, 16–29; Leek, S. and G. Christodoulides (2012), “A Framework of Brand Value in B2B Markets: The Contributing Role of Functional and Emotional Components,” Industrial Marketing Management, 41, 106–114.

⁸³ Kotler, P., and W. Pfoertsch (2006), B2B Brand Management, Evanston, IL: Springer (“Kotler and Pfoertsch (2006)”), p. 3.

⁸⁴ Kotler and Pfoertsch (2006), pp. 17–18, 46.

⁸⁵ Balmer, J. M. T., et al. (2020), “The role of corporate brand image for B2B relationships of logistics service providers in China,” Journal of Business Research, 117, 850–861; Iyer, P., et al. (2019), “Market orientation, positioning strategy and brand performance,” Industrial Marketing Management, 81, 16–29.

customers.⁸⁶ For both B2C and B2B brands, these associations can be both functional (e.g., quality, technology, capacity, infrastructure, after sales service, capabilities, reliability, and innovation) and emotional (e.g., risk reduction, reassurance, and trust).⁸⁷ Marketing research has found that both kinds of associations are important for B2B firms,⁸⁸ with functional associations generally contributing more to B2B brand strength.⁸⁹

95. Although the foundational principles of creating a strong brand are similar for B2B and B2C brands, the targets and marketing strategies are different. For example, the buying process can differ significantly between business and consumer markets. B2B firms tend to have fewer customers, but often each customer is larger and the relationship with the customer is more long-term.⁹⁰ The products sold by B2B firms are often more complex, and buying transactions often involve significant technical expertise on both sides.⁹¹ B2B products are generally purchased by a group within an organization rather than a single individual, and as such can be subject to complex within-firm restrictions and negotiations.⁹² Finally, B2B firms face a “derived demand” in that the demand for B2B products as inputs depends on the final demand for its products.⁹³

96. These differences mean that the marketing strategies through which a strong B2B brand is achieved can differ from those used by B2C brands. First, B2B brand focus tends to be

⁸⁶ Keller (2013), p. 31.

⁸⁷ Leek, S. and G. Christodoulides (2012), “A Framework of Brand Value in B2B Markets: The Contributing Role of Functional and Emotional Components,” *Industrial Marketing Management*, 41, 106–114.

⁸⁸ Casidy, R., et al. (2018), “The relative influence of functional versus imagery beliefs on brand sensitivity in B2B professional services,” *Industrial Marketing Management*, 72, 26–36; Leek, S. and G. Christodoulides (2012), “A Framework of Brand Value in B2B Markets: The Contributing Role of Functional and Emotional Components,” *Industrial Marketing Management*, 41, 106–114.

⁸⁹ Kotler and Pfoertsch (2006), pp. 45–46; Casidy, R., et al. (2018), “The relative influence of functional versus imagery beliefs on brand sensitivity in B2B professional services,” *Industrial Marketing Management*, 72, 26–36.

⁹⁰ Kotler and Pfoertsch (2006), p. 21.

⁹¹ Kotler and Pfoertsch (2006), p. 21.

⁹² Kotler and Pfoertsch (2006), p. 24.

⁹³ Kotler and Pfoertsch (2006), p. 22.

more targeted, since the relevant purchasers are a relatively small group of key buyers within customer firms, rather than the larger set of end users.⁹⁴ Second, although emotional appeals can also play a role in B2B branding, the degree of expertise among buyers and the often complex buying process at many firms means that many B2B brands emphasize the performance benefits and tangible points of differentiation of the product, and the reduction of risk associated with choosing the brand, relative to many B2C brands that emphasize the image of brand and its emotional connection with consumers.⁹⁵

The next sections apply these principles of brand equity to the Arm brand.

B. ARM HAS A STRONG AND DISTINCTIVE B2B BRAND

97. Arm is a B2B brand because Arm's customers are other businesses. As I discuss in Section VI.A. above, Arm's primary offerings are CPU products that address diverse performance, power, and cost requirements.⁹⁶ Arm also offers complementary products such as graphic processing units ("GPUs"), development software and tools, and system IP.⁹⁷ Arm's offerings in turn enable its licensees to develop, manufacture, and sell a wide range of technology products—including smartphones, tablets and personal computers, data centers and networking equipment, vehicles, smartwatches, thermostats, and drones and industrial robotics—to their own customers.^{98⁹⁹} Thus, Arm competes in a business market rather than a consumer

⁹⁴ Kotler and Pfoertsch (2006), p. 106. See also Casidy, R., et al. (2018), "The relative influence of functional versus imagery beliefs on brand sensitivity in B2B professional services," *Industrial Marketing Management*, 72, 26–36 at p. 111, in which the authors note that relationships with buyers are often a critical component of brand equity.

⁹⁵ Kotler and Pfoertsch (2006), pp. 45–46.

⁹⁶ See ARM_01259705.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ See, e.g., "Amlogic Answers the UHD Challenge with Landmark Implementation of ARM Mali-450 MP6 GPU." *BusinessWire*. (November 20, 2013) <<https://www.businesswire.com/news/home/20131119006559/en/Amlogic-Answers-the-UHD-Challenge-with-Landmark-Implementation-of-ARM-Mali-450-MP6-GPU>> ("ARM designs the technology that is at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices. . . . Combined with comprehensive design services,

market. Although the positive experience of its customer's customers is an important part of Arm's offering, Arm's direct customers are chip developers and manufacturers, such as Amazon, Google, Intel, NVIDIA, and Samsung, rather than end customers.¹⁰⁰

98. The value that the Arm Trademarks communicate to its customers is based on the pervasiveness and differentiating features of its CPU and ISA offerings. Arm's CPU architecture, which combines compute performance with industry-leading power efficiency, has become the world's most widely used CPU architecture.¹⁰¹ The Arm ISA, which [REDACTED] [REDACTED], has also become the world's most popular ISA.¹⁰² Software developers are incentivized to write software for Arm-based devices because it offers the biggest market for their products and chip designers are incentivized to choose Arm CPUs because they have the broadest support of software applications.¹⁰³ The Arm architecture and Arm ISA are crucial for Arm's customers to access this flourishing ecosystem.¹⁰⁴

99. The Arm Trademarks have been strong and distinctive marks for decades as demonstrated by the following:

- a. The Arm Trademarks have consistently been recognized by the World Intellectual Property Organization for its global goodwill, reputation, fame, and distinctiveness.¹⁰⁵

training, support and maintenance, and the company's broad Partner community, they provide a total system solution that offers a fast, reliable path to market for leading electronics companies.”)

¹⁰⁰ See ARM_01259705.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ See ARM_01315253; ARM_01315276; ARM_01315241; ARM_01315259; ARM_01315333; ARM_01315304; ARM_01315237; ARM_01315323; ARM_01315315; ARM_01315297; ARM_01315338; ARM_01315283; ARM_01315287; ARM_01315310; ARM_01315328; ARM_01315264.

b. More than 260 companies have reported shipping Arm-based chips this year.

And Arm CPUs were used in more than 250 billion chips last year.¹⁰⁶

c. Arm has received many awards and accolades such as Overall Winner of the

International Trade Awards in 2010; the Queen's Award for Enterprise in

2011;¹⁰⁷ the Linley Group's Best processor IP in 2014, 2018, and 2019;¹⁰⁸ and

TSMC OIP Partner of the Year for Processor IP for 2009-2014, 2019, 2020, and

2021.¹⁰⁹

100. Beyond building its brand through its performance and partnership with reference customers, Arm has worked to develop its brand among the relevant pool of potential buyers in other ways. Arm executives and employees regularly participate in industry events, on demand webinars, and Arm Tech Talks.¹¹⁰ Each year, Arm also invites its licensees to an event where Arm presents its technology roadmap.¹¹¹

101. A consistent finding in the marketing literature is that strong branding is most effective when the underlying product or service is of high quality, particularly in B2B markets

¹⁰⁶ See ARM_01259705.

¹⁰⁷ Shaw, Chris. "Queen's Awards 2011: Chip designs bring win for ARM." *NewElectronics*. (April 21, 2011) <<https://www.newelectronics.co.uk/content/news/queen-s-awards-2011-chip-designs-bring-win-for-arm/>>.

¹⁰⁸ "The Linley Group Announces Winners of Annual Analysts' Choice Awards." *The Linley Group*. (January 16, 2015) <<https://www.globenewswire.com/en/news-release/2015/01/16/1020683/0/en/The-Linley-Group-Announces-Winners-of-Annual-Analysts-Choice-Awards.html>>; "The Linley Group Announces Winners of Annual Analysts' Choice Awards." *The Linley Group*. (January 12, 2018) <<https://www.globenewswire.com/en/news-release/2018/01/12/1288835/0/en/The-Linley-Group-Announces-Winners-of-Annual-Analysts-Choice-Awards.html>>; "Arm Mali-G77 GPU Named Best Processor IP in The Linley Group's Analysts' Choice Awards." *Arm*. (January 20, 2020). <<https://newsroom.arm.com/news/arm-mali-g77-gpu-named-best-processor-ip-in-the-linley-groups-analysts-choice-awards>>.

¹⁰⁹ "TSMC Honors ARM with Partner Award for Fifth Consecutive Year." *Arm*. (November 3, 2014). <<https://www.arm.com/company/news/2014/11/29442>>; "TSMC Announces 2020 OIP Partner of the Year Awards for Excellence in Accelerating Silicon Innovation." *TSMC*. (October 20, 2020) <<https://pr.tsmc.com/english/news/2734>>; "Arm Awarded TSMC Partner of the Year Award for Processor IP." *Arm*. (October 3, 2018). <<https://newsroom.arm.com/news/arm-awarded-tsmc-partner-of-the-year-award-for-processor-ip>>; "TSMC Recognizes Partners of the Year at 2021 OIP Ecosystem Forum." *TSMC*. (October 27, 2021) <<https://pr.tsmc.com/english/news/2875>>.

¹¹⁰ See "Company Events." *Arm*. <<https://www.arm.com/company/events>>.

¹¹¹ Deposition of James Thompson, November 28, 2023, 39:10-16.

where buyers often have a high degree of technical expertise in evaluating the products and services that they purchase. For Arm's CPU customers, the virtuous cycle of adoption created by the Arm ecosystem provides a rich software ecosystem and access to broad product markets.

102. Arm's second amended F-1 filing states that its "brand and reputation are critical factors in [its] relationship with customers, employees, governments, suppliers, and other stakeholders. [Its] failure to address, or the appearance of [its] failure to address, issues that give rise to reputational risk...could significantly harm [Arm's] brand and reputation."¹¹²

103. Arm offers benefits to downstream customers. "Arm CPUs run the vast majority of the world's software, including the operating systems and applications for smartphones, tablets and personal computers, data centers and networking equipment, and vehicles, as well as the embedded operating systems in devices such as smartwatches, thermostats, drones, and industrial robotics. [Arm] estimate[s] that approximately 70% of the world's population uses Arm-based products, and the scale of Arm's reach continues to expand, with more than 30 billion Arm-based chips reported as shipped in the fiscal year ended March 31, 2023, alone."¹¹³

104. Further, Arm's innovation is responsive to consumer demands. "As consumers and enterprises continue to demand more from their devices, the pervasiveness of high-performance and energy-efficient semiconductors will continue to expand."¹¹⁴ In addition, as Arm's EVP and Chief Commercial Officer Will Abbey commented, "The growth of AI, I believe, is the growth of Arm.... We believe that whether it's training, which is taking place

¹¹² ARM_01259705 – 0105 at 9758.

¹¹³ See ARM_01259705 – 0105 at -9712.

¹¹⁴ See ARM_01259705 – 0105 at -9715.

today, which will lead to inferencing downstream, the ARM architecture is ideal to enable AI at scale.”¹¹⁵

105. In summary, a brand is more than a unique identifier of source, it also communicates a promise of certain benefits to customers based on Arm technology. A strong brand like Arm arises from the thoughts, feelings, and associations that are linked to the Arm brand. The strength of the Arm brand means that products that are linked to Arm (e.g., as an ingredient of the product) are conferred positive associations that have been developed by the Arm brand over the years of successful innovation.

106. The ecosystem created by Arm over decades, enables Arm’s customers to access broad markets by creating compatible CPUs and software architecture. The Arm brand and Arm Marks also signify versatility, balancing power-efficiency, and performance. Use of the Arm communicates these benefits. Accordingly, the Arm brand serves as a strong performance indicator when customers make purchasing decisions.¹¹⁶

C. **TRADEMARK INFRINGEMENT**

1. **Qualcomm’s Historical Use of Arm Trademarks**

107. Qualcomm has consistently used Arm’s Trademarks in customer communication for its products that incorporate, are derived from, use, or rely on Arm Technology. For example, Qualcomm’s Application Processors Selector Guide for IoT application processors include descriptions of several different tiers of Systems-on-Chip (“SoC”), noting that the CPU is made up of certain Arm cores or Arm “compliant” cores.¹¹⁷

¹¹⁵ Lardinois, Frederic. “Arm after the IPO.” *TechCrunch*. (September 14, 2023) <<https://techcrunch.com/2023/09/14/arm-after-the-ipo/>>.

¹¹⁶ ARM_01259705 – 0105 at 9758.

¹¹⁷ “Qualcomm Application Processors Selector Guide.” *Qualcomm*. <<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/application-processors-selection-guide.pdf>>.

108. As another example, the Device Specification for Qualcomm's Snapdragon™ 410E (APQ 8016E) processor, published in September 2016, includes several uses of Arm's Trademark.¹¹⁸ The Specification described the features of the APQ 8016E chipset as including "Quad Arm Cortex" and included a functional block diagram showing the placement of the Arm processor cortex.¹¹⁹ The APQ 8016E was marketed as suitable for use in "music players[,] cameras," gaming devices, and GPS and Wi-Fi technology.¹²⁰ The Product Brief for the APQ 8016E touts the use of Arm's Cortex and notes that the chipset features the Arm v8-A ISA, which is "an efficient instruction set."¹²¹

109. A Qualcomm's 2022 Tech Summit, it announced that its Kryo CPU will be "built on the latest ARM-V9 architecture."¹²²

110. Qualcomm's Snapdragon 8 gen 3 Mobile Platform Product Brief, published October 23, 2023, described the CPU component as incorporating "Arm Cortex-X4 technology."¹²³

111. Qualcomm has also used Arm's Trademarks in connection with press releases marketing its Snapdragon line of products. For example, a February 27, 2022, press release published in relation to the 2022 Mobile World Congress event, stated: "Qualcomm Technologies works with a broad range of OEMs, independent software vendors (ISVs), network

¹¹⁸ "Qualcomm® Snapdragon 410E (APQ 8016E) processor Device Specification." *Qualcomm*. (Sept. 2016) <https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/snapdragon_410e_apq_8016e_data_sheet.pdf>.

¹¹⁹ *Id.* at 9-12.

¹²⁰ *Id.* at 9.

¹²¹ "Qualcomm® APQ8016E Application Processor." *Qualcomm*. <<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/apq8016e-product-brief.pdf>>.

¹²² Sourabh Jain, "Qualcomm Snapdragon Tech Summit 2022- Snapdragon 8 Gen 2, Oryon CPU, AR2 Gen 1 platform, and other announcements," *Business Insider*. (Nov. 17, 2022) <<https://www.businessinsider.in/tech/news/qualcomm-snapdragon-tech-summit-2022-snapdragon-8-gen-2-oryon-cpu-ar2-gen-1-platform-and-other-announcements/articleshow/95581109.cms>>

¹²³ "Snapdragon® 8 Gen 3 Mobile Platform." *Qualcomm*. <https://docs.qualcomm.com/bundle/publicresource/87-71408-1_REV_B_Snapdragon_8_gen_3_Mobile_Platform_Product_Brief.pdf>.

operators, and channel partners to expand the Arm®-based Snapdragon computing ecosystem for enterprise use cases.”¹²⁴

2. Qualcomm’s Current and Future Use of Arm Trademarks with Nuvia Products

112. Qualcomm has continued to describe the Nuvia-based Products using “Arm.” For example, Qualcomm’s public statements regarding the technology at issue use Arm’s brand to communicate there is some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm regarding the Nuvia Products.

a. A press release published on January 3, 2022 touts the “broad support from ecosystem partners for the PC industry’s transition to Arm®-based computing,” and at the same time states that Qualcomm’s “acquisition of NUVIA uniquely positions Qualcomm Technologies to drive this industry wide transition.” The press release quoted Qualcomm CEO Cristiano Amon saying: “The future of the PC industry is modern Arm-based architectures and Snapdragon compute platforms will continue to lead and define the future of productivity, education, and connected entertainment[.]”¹²⁵

b. At Qualcomm’s 2023 Snapdragon Summit, Director of Product Management Manju Varma announced that the Oryon CPU would be the first “CPU on Arm-based architecture to hit over 4GHz.”¹²⁶

¹²⁴ “Qualcomm Expands Snapdragon Compute Ecosystem for the Next-Generation of Enterprise-Grade PCs.” *Qualcomm*. (February 27, 2022) <<https://www.qualcomm.com/news/releases/2022/02/qualcomm-expands-snapdragon-compute-ecosystem-next-generation-enterprise>>.

¹²⁵ “Qualcomm and Leading Compute Partners Build Industry Momentum for Windows on Arm PCs Powered by Snapdragon Compute Platforms, Qualcomm Inc.” *Qualcomm*. (Jan. 3, 2022) <<https://www.qualcomm.com/news/releases/2022/01/>>

¹²⁶ ARM_01422901 at 37:32.

c. On Qualcomm's November 1, 2023, Earnings Call, Qualcomm CEO Cristiano

Amon explained the Snapdragon X Elite "Arm-based PC processor . . . is going to be part of the expansion of TAM [Total Addressable Market] for Qualcomm."¹²⁷

113. [REDACTED]

[REDACTED]

[REDACTED]

114. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

115. At present, Qualcomm has continued to suggest sponsorship, affiliation, or certification of the Nuvia Products by Arm by publicly representing that it continues to use and develop derivatives or embodiments of Arm Technology, including [REDACTED]

116. For example, in June 2022, Qualcomm said that its Nuvia chips will soon join the industry-wide "ecosystem transition to Arm" and that by "late next year, beginning 2024, you're going to see Windows PCs powered by Snapdragon with a Nuvia-designed CPU."¹³⁰ In November 2022, Qualcomm said: "the creation of our custom CPU was started by Nuvia engineers while employed at Nuvia."¹³¹

¹²⁷ "Qualcomm (QCOM) Q4 2023 Earnings Call Transcript." *The Motley Fool*. (September 30, 2023) <<https://www.fool.com/earnings/call-transcripts/2023/11/01/qualcomm-qcom-q4-2023-earnings-call-transcript/>>.

[REDACTED]

¹³⁰ Complaint ¶¶ 48-49 (citing *Qualcomm CEO on What He Really Thinks of Apple*, The Daily Charge (June 9, 2022), <https://podcasts.apple.com/us/podcast/qualcomm-ceo-on-what-he-really-thinks-of-apple/id1091374076?i=1000565773375>).

¹³¹ "Qualcomm dubs Nuvia CPU 'Oryon,' on track for 2023." *PCWorld*. (November 17, 2022) <<https://www.pcworld.com/article/1382740/qualcomm-dubs-nuvia-cpu-oryon-on-track-for-2023.html>>.

117. Terms such as [REDACTED] and [REDACTED] have a particular meaning within the relevant market, [REDACTED]

[REDACTED]
[REDACTED].¹³²
[REDACTED]
[REDACTED]
[REDACTED]

118. Qualcomm's use of Arm's Trademark in connection with the Nuvia Products—including with phrases such as [REDACTED] and [REDACTED] falsely convey that such products [REDACTED]

[REDACTED]
[REDACTED]

3. Third-Party Mention of Arm Trademarks Regarding Qualcomm's Nuvia Products

119. Even if Qualcomm no longer plans to use Arm's Trademarks in its communication, which is not the case at present, industry press covering the technology at issue has used Arm's brand to suggest endorsement, affiliation, or certification of the technology at issue by Arm.

[REDACTED]
[REDACTED]

¹³⁴ See ¶ 62.

- a. HONOR, a Chinese smartphone company announced at the 2023 Snapdragon Summit “the exciting news that HONOR is developing an ARM PC using the newly announced Snapdragon X Elite platform.”¹³⁵
- b. An article published by Extremetech explains “[t]he Qualcomm and former Nuvia teams have morphed Nuvia’s ARM designs into the Oryon custom CPU core,” and that the Snapdragon Z Elite chips, based on this CPU, “will replace the 8cx chips in the company’s portfolio.”¹³⁶
- c. An international business and financial news outlet article describes Qualcomm’s “major announcement” regarding “the launch of its new Oryon CPU.” The article notes “The Oryon CPU is Qualcomm’s first custom Arm CPU design” and goes on to tout the performance and power metrics of the Oryon CPU, stating the “Oryon CPU is a major development for the tech industry.”¹³⁷
- d. In a video sponsored by Qualcomm, blogger Austin Evans notes that Qualcomm’s Snapdragon X Elite chip is “Arm-Powered” and was “developed on Arm.”¹³⁸
- e. An article published on October 29, 2023, by the Motley Fool, a private financial and investing advice company, stated “the new X Elite chips, powered by Oryon

¹³⁵ Stradling, Colton. “HONOR announces its first ARM PC built on Snapdragon X Elite will release next year.” *Windows Central*. (October 25, 2023) <<https://www.windowscentral.com/honor-announces-its-first-arm-pc-built-on-snapdragon-x-elite-will-release-next-year>>.

¹³⁶ Whitwam, Ryan. “Qualcomm Announces Snapdragon X Elite Processor for Laptops.” *ExtremeTech*. (October 25, 2023) <<https://www.extremetech.com/computing/qualcomm-announces-snapdragon-x-elite-processor-for-laptops>>.

¹³⁷ Priya Pathak. “Qualcomm takes swing at Intel with Oryon, unlocks 240 fps gaming on flagship phones with 8 Gen 3: Top announcements from Snapdragon Summit.” *Financial Express* (Oct. 25, 2023).

¹³⁸ Evans, Austin. “The Biggest Upgrade for Windows PCs in YEARS.” (October 28, 2023) <<https://www.youtube.com/watch?v=Vt1EmsvEyd4>>.

CPUs [Qualcomm] got when it acquired Arm-based designer Nuvia in 2021, claim some impressive performance.”¹³⁹

f. Counterpoint Technology Market Research published an article dated November 2, 2023 stating: “The Snapdragon X Elite is an ARM-based processor[.]”¹⁴⁰ The article notes several times that the Oryon CPU is “Arm-based.”¹⁴¹

120. That third parties, including industry news outlets and Qualcomm’s own licensees, are using Arm’s Trademark in connection with the Nuvia Products demonstrates that participants throughout the relevant industry are associating the Nuvia Products with Arm sponsorship and falsely assuming a licensing relationship exists between Arm and Qualcomm regarding the Nuvia Products.¹⁴² Such third-party mentions also amplify the confusion created by Qualcomm’s own use by suggesting Arm sponsorship and endorsement of the Nuvia Products to an even broader audience.

121. Qualcomm’s unauthorized use of the Arm Mark for Nuvia Products will mislead its customers and other relevant industry participants into believing that there is some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm. By using the Arm Mark in connection with the Nuvia Products, Qualcomm would benefit from the positive and favorable associations with the Arm Mark.

¹³⁹ Rossolillo, Nicholas. “Qualcomm Is Gunning for a Piece of Intel’s Lunch -- Time to Buy Qualcomm Stock?” *The Motley Fool*. (October 29, 2023) <<https://www.fool.com/investing/2023/10/29/qualcomm-is-gunning-for-a-piece-of-intels-lunch-ti/>>.

¹⁴⁰ “Qualcomm Snapdragon X Elite Unveiled: ARM-based SoC for Windows-powered AI PCs.” *Counterpoint Research*. (November 2, 2023) <<https://www.counterpointresearch.com/insights/qualcomm-snapdragon-x-elite-arm-based-soc-windows-ai-pc/>>.

¹⁴¹ *Id.*

¹⁴² See ¶ 62.

D. QUALCOMM'S UNAUTHORIZED USE OF THE ARM MARK IS LIKELY TO HARM ARM

122. As discussed above, Qualcomm has used Arm's Trademarks in its communications about Nuvia Products that incorporate, are derived from, or rely on Arm Technology. It has done so by marking the Nuvia Products with the ARM Mark, and by publicly describing the Nuvia Products as [REDACTED] and [REDACTED]. As discussed, use of these terms and of the Arm Trademarks [REDACTED]

[REDACTED]
[REDACTED] In other words, it signals that the Nuvia Products have gone through a [REDACTED] and [REDACTED] process with [REDACTED], such that [REDACTED]
[REDACTED] Arm and comply [REDACTED].¹⁴³

123. [REDACTED]
[REDACTED]
[REDACTED]

124. Further, Qualcomm's public statements regarding the technology at issue have already relied on Arm's brand to suggest endorsement, affiliation, or certification by Arm and confirm that Qualcomm intends to use Arm Trademarks in connection with products incorporating the [REDACTED]. By describing the Nuvia Products with references to Arm, [REDACTED], or [REDACTED] and by using the ARM Mark in connection with promotion of the Nuvia Products, like at the Snapdragon Summit, Qualcomm has publicly made a clear connection between the technology at issue and Arm's brand.

¹⁴³ Deposition of Jonathan Armstrong, December 8, 2023, 82:20-83:8.

¹⁴⁴ [REDACTED]

125. The absence of a license for Qualcomm's use of Arm's Trademarks in those products necessarily means that such use is infringing.¹⁴⁵

126. By using the ARM Mark without Arm's permission in its press announcements, at its launch events, and on its website, Qualcomm has used an asset developed by Arm (its brand) to increase consumer acceptance of new products. The use of the familiar and trusted Arm brand will enable Qualcomm to communicate that the Nuvia Products are licensed and have been verified and validated by Arm, thereby facilitating acceptance and adoption of such products, and enabling Qualcomm to access the broad marketplace associated with the Arm ecosystem. Thus, by using the Arm Trademarks without Arm's permission, Qualcomm will draw on the equity of the Arm Mark to increase the likelihood of consumer acceptance of its products.

127. Qualcomm's unlicensed use of Arm's Trademarks will cause harm to Arm by resulting in a loss of control to Arm of its brand and goodwill. In general, the loss of brand image and goodwill occurs because any dissatisfaction or problems associated with the infringing user, or its products are likely to be erroneously attributed also to the trademark owner and/or its products. Negative attributions and inferences concerning the infringing user, or its products can also spillover to Arm if it is seen as being associated with such products.

128. As discussed above, the use of the Arm Trademarks and the terms [REDACTED] and [REDACTED] signal that the Nuvia Products have been developed under a valid Arm license. Qualcomm's unauthorized use of Arm's Trademarks means that how customers view the Arm Mark is now connected to the quality and outcomes associated with the Nuvia Products. For example, any Nuvia Products that have the unauthorized use of Arm's Trademarks and have some negative customer response or experience place Arm's valuable brand asset at risk.

¹⁴⁵ See ¶¶ 61, 62, 66.

Customers may also mistakenly attribute any issues with the performance of Qualcomm's Nuvia Products also to presumed flaws in the Arm ISA or failures of Arm's own engineering team.

129. As Will Abbey (Arm's Executive Vice President & Chief Commercial Officer) testified during his deposition: "At the end of the day, Arm's an IP company. Our confidential information, our intellectual property is so germane to what we do. [REDACTED]

[REDACTED] ."¹⁴⁶

130. Mr. Abbey also testified that "[i]f [REDACTED]

[REDACTED] I [REDACTED]

[REDACTED]."¹⁴⁷

131. Therefore, Qualcomm's and third parties' continued use of the Arm Trademarks and its continued drawing of a false connection between its Nuvia Products and Arm's brand in the eyes of the customer deprives Arm of control over its brand and the management of its goodwill in the industry and to consumers.

132. As discussed in Section VI.C., Arm licenses its technology to many different customers who compete in the same marketplace as Qualcomm. Qualcomm's unauthorized use of Arm's Trademark in connection with the Nuvia Products [REDACTED]

[REDACTED]
[REDACTED] Customers who might have sought out an Arm product may instead turn to Qualcomm's products because they mistakenly understand, because of Qualcomm's infringing use of Arm Trademarks, that Qualcomm's Nuvia Products are equivalent to Arm technology, or somehow supported by Arm.

¹⁴⁶ Deposition of Will Abbey, October 27, 2023, p. 324.

¹⁴⁷ Deposition of Will Abbey, October 27, 2023, p. 361.

133. Customers of Nuvia Products themselves would be harmed by the deceptive nature of the sale and the loss of benefits they sought from using Arm's products. Customers seeking to use an Arm product who instead receive a Qualcomm product are harmed and deceived by getting a product that is not in fact sponsored by or affiliated with Arm, and does not come with the unique benefits, like the support and maintenance from Arm engineers, that a true partnership with Arm would bring.

E. QUALCOMM'S UNAUTHORIZED USE OF THE ARM MARK SHOULD NOT CONSTITUTE FAIR USE

134. I understand that Qualcomm contends that its unauthorized use of the Arm Trademarks "constitutes fair use."¹⁴⁸

135. I have been informed that, to demonstrate fair use, Qualcomm must show (1) that its unauthorized use of the Arm Trademarks is necessary to describe both Arm's product or service and Qualcomm's product or service; (2) that Qualcomm uses only so much of the Arm Trademarks as is necessary to describe Arm's product; and (3) that Qualcomm's conduct or language reflect the true and accurate relationship between Arm's and Qualcomm's products or services.

136. It is my opinion that Qualcomm's unauthorized use of the Arm Trademarks would not constitute fair use. For example, as I discussed above in Section VII.C., Qualcomm's unauthorized use of the Arm Trademarks, in particular phrases such as [REDACTED] and [REDACTED] [REDACTED] falsely signifies that the [REDACTED], [REDACTED] and have been [REDACTED] and [REDACTED] by Arm and that the [REDACTED].¹⁴⁹

¹⁴⁸ Defendants Responses and Objections to Plaintiff's First Set of Requests for Admission, Request No. 24.

¹⁴⁹ See ¶ 62.

Qualcomm's unauthorized use of the Arm Trademarks would *not* reflect the true and accurate relationship between Arm and Qualcomm's Nuvia-based Products, at least because there is no licensing relationship between Arm and Qualcomm with respect to the Nuvia Products and because the Nuvia-based Products have not gone through a verification and validation process with Arm's support and maintenance in order to comply with Arm's ISA requirements. (*See, supra*, Sec. VII.C.)

137. I have been informed that Qualcomm bears the burden to demonstrate fair use, including the factors discussed above in ¶ 135. Accordingly, I have not conducted a full analysis on why Qualcomm's unauthorized use of the Arm Trademarks would not constitute fair use, but I reserve the right to do so in response to any expert opinion offered by Qualcomm regarding fair use.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on December 20, 2023.



RAVI DHAR

EXHIBIT A

EXHIBIT A

June 2023

RAVI DHAR
Yale School of Management
165 Whitney Avenue
Yale University
New Haven, CT 06520
(203) 432-5947

Employment

George Rogers Clark Professor of Management	2005 - Present
Professor of Psychology (<i>joint appointment</i>)	2003 – Present
Director, Yale Center for Customer Insights	2004 – Present
Professor of Marketing,	2000 – Present
Associate Professor of Marketing,	1997 - 2000
Assistant Professor of Marketing	1992 - 1997
Yale School of Management	

Other Appointments

Visiting Faculty, HEC Paris	Summer 1996
Visiting Associate Professor, Stanford University	Spring 1998
Visiting Professor, Erasmus University	Summer 2000, 2001
Visiting Professor, New York University	Spring 2005, Spring 2010

Education

Haas School of Business, UC Berkeley	1988-1992
Ph. D. (Business Administration)	1992
M.S. (Business Administration)	1990
Indian Institute of Management	1987
M.B.A.	
Indian Institute of Technology	1985
B.Technology	

Academic Honors and Fellowships

Distinguished Alumnus Award, Indian Institute of Management, 2013
Distinguished Scientific Contribution Award, SCP, 2012
Yale SOM Alumni Association Teaching Award, 2012
Finalist O'Dell Award 2012
Finalist, O'Dell Award, 2008
Winner, O'Dell Award 2005
Finalist, O'Dell Award, 2004
Finalist, Paul Green Award, 2004
AMA Consortium Faculty Fellow, 2003- 2009, 2010, 2012, 2013
INFORMS Doctoral Consortium Faculty – Multiple Years
ACR Doctoral Consortium Faculty – Multiple Years
John A. Howard Doctoral Dissertation Award (Honorable Mention), 1993

EXHIBIT A

AMA Doctoral Consortium Fellow, 1991

Research Interests

Consumer Behavior	Marketing Strategy
Judgment and Decision Making	Branding
E-Commerce	Behavioral Finance

Teaching Interests

Marketing Management	Consumer Behavior
Marketing Strategy	Behavioral Decision Theory
Financial Services	E-Commerce Marketing

Professional Affiliation (Member)

American Marketing Association
Association for Consumer Research
Society of Judgment and Decision Making

Professional Activities

Editorial Board, *Journal of Consumer Research, 1997 – Present, Past Associate Editor*
Journal of Consumer Psychology, 1997 – 2002, 2005 - Present
Journal of Marketing Research, 2001 – Present, Associate Editor
Journal of Marketing, 2005 - Present
Marketing Letters, 2000 - Present
Marketing Science, 2002- 2011, Past Area Editor

Occasional Reviewer, *Marketing, Management, Psychology Journals, NSF, etc.*

Publications in Journals

Approximate Number of Citations in Google Scholar: 22,000+

1. “Targeted Electronic Health Record Alerts to Improve Management of Patients Hospitalized with Heart Failure and Reduced Ejection Fraction: The PROMPT-AHF Clinical Trial,” (w Lama Ghazi...Tariq Ahmad), *European Heart Journal*, 2023.
2. “Planning Prompts as a Tool for Increasing Habitual Sustainability Behaviors,” (w. Eleanor Putnam-Farr, Jane Upritchard, Michiel Bakker, Maragret Gorlin), *Journal of the Association for Consumer Research*, 2023.
3. “Driving Sustainable Food Choices: How to Craft an Effective Sustainability Labeling System (w. Paul Stillman, Chavanne Handon, Jonathan Kaplan,

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Treeny Ahmed, Michiel Bakker), *Journal of the Association for Consumer Research*, 2023.

4. [Electronic alerts to improve heart failure therapy in outpatient practice: a cluster randomized trial](#) (w Lama Ghazi...Tariq Ahmad), *Journal of the American College of Cardiology*, 2022.
5. Alerting Clinicians to 1-Year Mortality Risk in Patients Hospitalized With Heart Failure: The REVEAL-HF Randomized Clinical Trial (w Tariq Ahmad et al.) *JAMA Cardiology*, 2022.
6. “The impact of touchscreen devices on consumers’ choice confidence and purchase likelihood,” (with Johannes Hattula and Walter Herzog), *Marketing Letters*, 2022.
7. “In the Face of Self-threat: Why Ambivalence Heightens People's Willingness to Act,” (with Taly Reich and Alex Fulmer), *Organizational Behavior and Human Decision Processes*, 2022.
8. “Attractive and Confident: How Boosting Self-perceived Attractiveness Reduces the Context Effects of All-average, Default, and Compromise options,” (with Zixi Jiang, Jing Xu, and Margaret Gorlin), *Journal of Marketing Research*, 2021.
9. The Curse of the Original: How and When Heritage Branding Reduces Consumer Evaluations of Enhanced Products (with Minju Han, George Newman, Rosanna Smith), *Journal of Consumer Research*, 2021.
10. When does Altruism Trump Self-Interest? The Moderating Role of Affect in Extrinsic Incentives (with Uzma Khan and Kelly Goldsmith), *Journal of the Association for Consumer Research*, 2020.
11. “The Uncertain Self: How Self-Concept Structure Affects Subscription Choice,” (with Jennifer Savary), *Journal of Consumer Research*, 2020.
12. By-Brand or By-Category? The Effect of Display Format on Brand Extension Evaluation" (with Xiaoying Zheng and Ernest Baskin), *Journal of Retailing*, 2019.
13. “You Don’t Blow Your Diet on Twinkies: Choice Processes When Choice Options Conflict with Incidental Goals,” (with K. Goldsmith and EMS Friedman), *Journal of the Association for Consumer Research*, 2019.
14. “Apples, Oranges and Erasers: The Effect of Considering Similar versus Dissimilar Alternatives on Purchase Decisions,” (with Liz Friedman and Jennifer Savary), *Journal of Consumer Research*, 2018.
15. “Seeing Stars: How the Binary Bias Distorts the Interpretation of Customer Ratings,” (w Matt Fisher and George Newman), *Journal of Consumer Research*, 2018.

EXHIBIT A

16. "Effect of Intelligence on Consumers' Responsiveness to a Pro-Environmental Tax: Evidence from Large-Scale Data on Car Acquisitions of Male Consumers," (w Jaakko Aspara and Xueming Luo), *Journal of Consumer Psychology*, 2017.
17. "Proximity of Snacks to Beverages Increases Food Consumption in the Workplace: A Field Study," (w E. Baskin, M. Gorlin, Z. Chance, N. Novemsky, K Huskey, M. Hatzis), *Appetite*, 2016.
18. "Mental Representation Changes the Evaluation of Green Product Benefits," (with Kelly Goldsmith and George Newman), *Nature Climate Change*, 2016.
19. "Closer to the Creator: Temporal Contagion Explains The Preference for Earlier Serial Numbers (with R. Smith and G. Newman), *Journal of Consumer Research*, 2016.
20. "Sophisticated by Design: the Nonconscious Influences of Primed Concepts and Atmospheric Variables on Consumer Preferences," (with T. Andrew Poehlman and John A. Bargh), *Customer Needs and Solutions*, 2015.
21. "Positive Consequences Of Conflict On Decision Making," (with J. Savary, T. Kleiman, and R. Hassin), *Journal of Experimental Psychology: General*, 2015.
22. "The Technological Conundrum: How Rapidly Advancing Technology Can Lead To Commoditization," (with T. Chan and W. Putsis), *Customer Needs and Solutions*, 2015.
23. "When Going Green Backfires: How firm Intentions Shape the Evaluation of Socially Beneficial Product Enhancements," (with G. Newman and M. Gorlin), *Journal of Consumer Research*, 2014.
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13. "Choice Deferral," in The Elgar Companion to Consumer Research and Economic Psychology (eds. P. Earl and S. Kemp), 1999.

Select Working Papers / Papers Under Review

1. "Ironic Effects of Goal Activation on Choice," (with K. Goldsmith), under first review.
2. "The Effect of Goal Breadth on Consumer Preferences," (with E. Kim), under first review.
3. "Can Investors Multiply and Divide: Investors' response to Stock Splits," (with N. Zhu and Dan Ariely).
4. "Category Expenditure and Promotion: Can Private Labels Expand the Pie," (with W. Putsis), Working Paper.
5. "Mindset over Matter: The Interplay between Goals and Preferences," (with A. Pocheptsova), Working Paper.

Conference Proceedings Publications

1. Constructing preferences: The role of comparisons in consumer judgment and choice," (with S. Zhang) *Proceedings of the Association for Consumer Research*, University of Chicago Press (1999).
2. "Sequential Choices and Uncertain Preferences," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1997).

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3. "Causes and Effects of Reference Effects in Choice," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1997).
4. "New Directions in Mental Accounting," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1995).
5. "Decision Difficulty and Uncertain Preferences: Implications for Consumer Choice," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1994).
6. "Behavioral Decision Research: Theory and Applications," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1993).
7. "To Choose Or Not To Choose: This is the Question," *Proceedings of the Association for Consumer Research*, University of Chicago Press (1992).

Invited and Conference Presentations

Invited Academic Presentations (* denotes multiple presentations)

Boston College
Carnegie-Mellon University
Chinese University, Hong Kong
*Columbia University**
*Cornell University**
*Duke University**
Harvard University
Hong Kong University of Science and Technology
*IIPM**
*INSEAD**
Indiana University
Korea University
*London Business School**
*MIT**
National University of Singapore
*New York University**
*Northwestern University**
Ohio State University
Pennsylvania State University
*Stanford University**
Texas A&M University
Tilburg University
Tulane University
University of Alberta
University of Arizona
University of British Columbia (planned)

EXHIBIT A

*University of California, Berkeley**
*University of California, Los Angeles**
University of California, San Diego
*University of Chicago**
University of Delaware
University of Colorado
University of Florida
University of Houston
*University of Illinois, Urbana-Champaign**
University of Miami
University of Maryland
University of Massachusetts, Amherst
*University of Michigan**
*University of North Carolina**
*University of Peking**
*University of Pennsylvania**
*University of Rotterdam**
University of Texas, Austin
University of Utah
*University of Toronto**
University of Vienna
*Washington University, St. Louis**

Conference Presentations (Over 300 presentations at conferences, consortiums, keynotes, symposiums, workshops, etc.) Recent presentations include:

Keynote Addresses to Practitioners, Various Events
Choice Symposium
CEO Roundtables, New York and New Haven
CMO Roundtables, Various Organizations
ACR
Informs
Judgment and Decision Making
Behavioral Decision Research in Management
Society of Consumer Psychology

EXHIBIT B

Exhibit B

Ravi Dhar's Prior Testimony (past 4 years or more)

1. Delta Air Lines, LLC v. Marriott International, Inc. And Marriott Worldwide Corp (Deposition)
2. Matthew Macormic and Eric Howard v. Vi-Jon LLC (Deposition)
3. Joseph Mier, et al. v. CVS Health and Vi-Jon LLC (Deposition)
4. Orgain v. Iovate, et al. (Deposition and Trial)
5. Jackson et al. v. Anheuser-Busch Companies, LLC and Miami Beer Venture, LLC (Deposition)
6. Girl Scouts of the United States of America v. Boy Scouts of America (Deposition)
7. Ferrari v. Vitamin Shoppe Inc. (Deposition)
8. AT&T Mobility LLC v. Mark Thomann and Dormitus Brands LLC (Deposition)
9. Alfwear, Inc. v. Mast-Jagermesiter US, Inc. et al. (Deposition)
10. State of Washington v. Comcast, et al. (Deposition and Trial)
11. Re: Animal Legal Defense Fund v. Hormel Food Corporation Matter (Deposition)
12. Bay Parc Plaza Apartments, L.P., et. al. v. Airbnb, Inc., et al. (Deposition)
13. Oddo, et al. v. Arcoaire Air Conditioning and Heating, et al. (Deposition)
14. Saxon Glass Technologies, Inc. v. Apple Inc. (Deposition)
15. In Re: Emerson Electric Co. Wet/Dry Vac Marketing and Sales Practices Litigation (Deposition)
16. In the Matter of Satellite Radio and "Preexisting" Subscription Services (SDARS III), Copyright Royalty Board (Deposition and Hearing)
17. Biscotti Inc. v. Microsoft Corp. (Deposition and Trial)
18. FTC v. DirecTV, Inc. (Deposition)
19. Zakaria v. Gerber Products Co. (Deposition)
20. Moab Industries, LLC v. Chrysler Group, LLC (Deposition and Trial)
21. In Re: Tropicana Orange Juice Marketing and Sales Practices Litigation (Deposition)
22. FTC v. Amazon.com, Inc. (Deposition)

23. Ericsson, et al. v. TCL Communication Technology Holdings, Ltd., et al. (Deposition)
24. Parallel Network Licensing v. International Business Machines Corporation (Deposition)

EXHIBIT C

Exhibit C

LIST OF MATERIALS CONSIDERED

PLEADINGS, MOTIONS, AND TRADEMARK REGISTRATIONS

Arm's Complaint and Exhibits, dated August 31, 2022
Qualcomm's Answer and Counterclaims, dated September 30, 2022
Qualcomm's Answer and Amended Counterclaims, dated October 26, 2022
Arm's Answer to Amended Counterclaims, dated November 15, 2022
USPTO Trademark Registration No. 5,692,669 and filed documents
USPTO Trademark Registration No. 5,692,670 and filed documents

DISCOVERY

Arm's Responses and Objections to Qualcomm's First Set of Interrogatories (Nos. 1-11), dated February 27, 2023
Arm's Supplemental Responses and Objections to Qualcomm's First Set of Interrogatories (Nos. 1-11), dated November 17, 2023
Arm's Supplemental Responses and Objections to Qualcomm's Third Set of Interrogatories (No. 20), dated November 17, 2023
Qualcomm's Responses and Objections to Qualcomm's First Set of Requests for Admission (Nos. 1-30), dated October 20, 2023

DEPOSITION TRANSCRIPTS

October 12, 2023 Deposition of Manu Gulati and Exhibits 1-33 thereto
October 27, 2023 Deposition of Will Abbey and Exhibits 19-30 thereto
October 27, 2023 Deposition of Nitin Sharma and Exhibits 1-29 thereto
November 3, 2023 Deposition of Gerald Williams and Exhibits 1-46 thereto
November 9, 2023 Deposition of Paul Williamson and Exhibits 19, 29, 45-74 thereto
November 16, 2023 Deposition of Simon Segars and Exhibits 27, 49, 100-114 thereto
November 28, 2023 Deposition of Mike Roberts and Exhibits 1-6 thereto
November 28, 2023 Deposition of Jim Thompson and Exhibits 1-19 thereto
December 8, 2023 Deposition of Jonathan Armstrong and Exhibits 45, 135-141 thereto

PRODUCED MATERIALS

ARM_00002955
ARM_00002988
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ARM_00051126
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ADDITIONAL PUBLIC LITERATURE AND WEBPAGES

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Exhibit C

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EXHIBIT 13

<p>1 2 APPEARANCES: 3 4 MORRISON FOERSTER LLP Attorneys for Plaintiff 5 707 Wilshire Boulevard Los Angeles, California 90017 6 BY: NICHOLAS RYAN FUNG, ESQ. 7 nfung@mofo.com 8 MORRISON FOERSTER LLP 9 Attorneys for Plaintiff 10 425 Market Street San Francisco, California 94105 11 BY: LYDIA DAVENPORT ESQ. ldavpport@mofo.com 12 (via Zoom) 13 MORRISON FOERSTER LLP 14 Attorneys for Plaintiff 15 4200 Republic Plaza 370 Seventeenth Street Denver, Colorado 80202 16 BY: SARAH E. BRICKEY, ESQ. 17 sbrickey@paulweiss.com (via Zoom) 18 19 PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP Attorneys for Defendants 20 1285 Avenue of the Americas New York, New York 10019 21 BY: ERIN J. MORGAN, ESQ. 22 ejmorgan@paulweiss.com 23 24 25</p>	<p>Page 2</p> <p>1 2 THE VIDEOGRAPHER: Good 3 morning. We are going on the record 4 at 9:11 a.m. on 5/3/24. Please 5 note that the microphones are 6 sensitive and may pick up whispering 7 and private conversations. Please 8 mute your phones at this time. Audio 9 and video recording will continue to 10 take place unless all parties agree 11 to go off the record.</p> <p>12 This is Media Unit 1 of the 13 video deposition of Ravi Dhar, taken 14 by counsel for defendants, in the 15 matter of ARM Ltd. vs. Qualcomm 16 Inc., Qualcomm Technologies, Inc., 17 and Nuvia, Inc., filed in The United 18 States District Court for the 19 District of Delaware, C.A. No. 20 22-1146 (MN). The location of the 21 deposition is the offices of Morrison 22 & Foerster LLP at 250 West 55th 23 Street, New York, New York.</p> <p>24 My name is Adam Venturini, 25 representing Veritext, and I am the</p>
<p>1 2 APPEARANCES (Cont.): 3 4 PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP Attorneys for Defendants 5 2001 K Street, N.W. Washington, D.C. 20006 6 BY: ANNA P. LIPIN, ESQ. 7 alipin@paulweiss.com 8 9 10 11 12 13 14 15 16 17 18 19 20 21 ALSO PRESENT: 22 ADAM VENTURINI, Videographer 23 24 25</p>	<p>Page 3</p> <p>1 DR. RAVI DHAR 2 videographer. The court reporter is 3 Anthony Giarro from the firm 4 Veritext. 5 I am not authorized to 6 administer an oath, I am not related 7 to any party in this action, nor am I 8 financially interested in the 9 outcome. 10 If there are any objections 11 to proceeding, please state them at 12 the time of your appearance. 13 Counsel and all present 14 remote will be noted on the 15 stenographic record. 16 Court reporter, please swear 17 in the witness, and then counsel may 18 proceed. 19 D R. R A V I D H A R , after having first 20 been duly sworn by a Notary Public of the 21 State of New York, was examined and testified 22 as follows: 23 EXAMINATION BY 24 MS. MORGAN: 25 Q Good morning, Dr. Dhar.</p>

<p style="text-align: right;">Page 6</p> <p>1 DR. RAVI DHAR 2 A Good morning. 3 Q Do you prefer Dr. Dhar or 4 Professor Dhar? 5 A People usually say Doctor. 6 It's shorter, yeah. 7 Q Okay. Great. 8 This is not the first time 9 you've been deposed; right? 10 A Correct. 11 Q You've been deposed -- I 12 think it's in your report -- like 23 13 times since 2019; is that right? 14 A Approximately. 15 Q So I'm not going to go 16 through a long song and dance about the 17 way this is going to work. But if you 18 don't understand any questions, feel free 19 to ask me to clarify. I'm going to try 20 to take a break about every hour. But if 21 you need a break, just let me know; okay? 22 A Great. 23 Q What did you do to prepare 24 for your deposition today? 25 A So I went back and obviously</p>	<p style="text-align: right;">Page 8</p> <p>1 DR. RAVI DHAR 2 counsel. 3 Q For how long? 4 A I think like, maybe 5 including lunch, maybe five hours or so, 6 yeah. 7 Q Who did you meet with? 8 A With Mr. Fung here. 9 Q Anyone else? 10 A I don't think we met with 11 anyone else, certainly not in person, but 12 maybe Mr. Fung might have made a call to 13 other attorneys. But they were not -- 14 that might be for like 10, 15 minutes. 15 Q Do you remember speaking to 16 any other attorneys on the phone when 17 Mr. Fung called them? 18 A Yes. I mean mostly saying 19 hello. That's it, yeah. 20 Q Do you remember who any of 21 those attorneys were? 22 A Yes. It was Ms. Davenport. 23 Q Did you talk to any ARM 24 employees in preparation for your 25 deposition?</p>
<p style="text-align: right;">Page 7</p> <p>1 DR. RAVI DHAR 2 looked at my reports and Professor 3 Steckel's report and the complaint and, 4 you know, some of the documents. 5 Q What documents did you look 6 at? 7 A I think just some of the 8 documents that I might have cited in 9 my -- you know, like certain places, I 10 cited the depositions. I looked at that. 11 I didn't obviously look at all the 12 depositions again. And so that's the 13 nature of the documents. 14 Q Do you remember looking at 15 any specific documents? 16 A Other than the depositions, 17 no. 18 Q Which depositions did you 19 look at? 20 A Some of the ones I cited, 21 like Mr. Armstrong or Mr. Sharma, 22 Mr. Amon, Mr. Abbey. 23 Q Did you meet with counsel to 24 prepare for your depo? 25 A I did meet, yes, with</p>	<p style="text-align: right;">Page 9</p> <p>1 DR. RAVI DHAR 2 A I did not. 3 Q Did you talk to any ARM 4 customers in preparation for your 5 deposition? 6 A I did not. 7 Q You said you re-reviewed 8 your reports; right? Did you see 9 anything that you want to correct? 10 A No. 11 Q You were retained in this 12 case by Morrison & Foerster, ARM's 13 counsel, to testify on ARM's behalf; 14 right? 15 A Correct. 16 Q When were you first 17 contacted about this case? 18 A Sometime in 2023, I think, 19 around August. 20 Q And do you know when you 21 were formally retained? 22 A Around that same time, yes. 23 Q You charge an hourly rate of 24 \$950 an hour; right? 25 A Correct.</p>

<p>1 DR. RAVI DHAR</p> <p>2 Q Do you know approximately 3 how many total hours you spent on this 4 case to date?</p> <p>5 A I do not recall.</p> <p>6 Q Can you ballpark it at all?</p> <p>7 A I don't have a good 8 estimate.</p> <p>9 Q Is it more than 20?</p> <p>10 A Oh, definitely more than 20.</p> <p>11 Q More than 50?</p> <p>12 A Yes.</p> <p>13 Q More than 70?</p> <p>14 A Yes.</p> <p>15 Q More than 100?</p> <p>16 A Yes. More than 100, yeah.</p> <p>17 Q More than 150?</p> <p>18 A Most likely, including the 19 second report here.</p> <p>20 Q Do you think it's more than 21 200?</p> <p>22 A I don't precisely know that. 23 But, you know, could be around that, 24 yeah.</p> <p>25 Q It could be around 200.</p>	<p style="text-align: right;">Page 10</p> <p>1 DR. RAVI DHAR</p> <p>2 A Yes. They have a standard 3 arrangement that I don't quite frankly 4 know. But it's some percentage of the 5 billing that they make. And then they 6 subtract some people. I have not 7 bothered to find out the exact model. 8 And it's not contingent on any outcomes 9 and forth.</p> <p>10 Q How many people are on the 11 team at Brattle that you worked with on 12 the reply?</p> <p>13 A I don't recall the total 14 number. There might be a couple at the 15 bank. But there were at least three or 16 four that I recall.</p> <p>17 Q Are those three or four 18 people, people you've worked with on 19 other reports?</p> <p>20 A At least a couple of them, 21 yes.</p> <p>22 Q Who are the people that 23 you've worked with before on the teams?</p> <p>24 A So there's a person called 25 Mr. Herscovici. I worked with him</p>
<p>1 DR. RAVI DHAR</p> <p>2 Okay.</p> <p>3 Did you work with the 4 Brattle Group on both your reports?</p> <p>5 A No. I worked with Brattle 6 Group on the reply report.</p> <p>7 Q Is there a reason that you 8 asked the Brattle Group to work with you 9 on the reply report?</p> <p>10 A Yes. Mostly on the 11 timeline, you know, I had limited time to 12 submit a response. And my day job, I was 13 teaching at that time. And I worked with 14 Brattle before. And I normally have some 15 kind of support. So I reached out to 16 Brattle.</p> <p>17 Q Did you work with any kind 18 of support on the opening report?</p> <p>19 A I did not.</p> <p>20 Q You did all the work 21 yourself?</p> <p>22 A Correct.</p> <p>23 Q Do you receive further 24 compensation based on the fees from the 25 Brattle Group?</p>	<p style="text-align: right;">Page 11</p> <p>1 DR. RAVI DHAR</p> <p>2 before. And there's another name whose 3 name I forget now, something. It'll come 4 back to me. But there were two of them 5 I've worked with before.</p> <p>6 Q Approximately how many times 7 have you worked with those two people 8 from the Brattle Group?</p> <p>9 A Maybe, you know, three or 10 four times at most, yeah.</p> <p>11 Q And that's three or four 12 times over how long?</p> <p>13 A Oh. Maybe the last four, 14 five years.</p> <p>15 Q Do you know what their 16 hourly rate is?</p> <p>17 A I do not.</p> <p>18 Q Prior to your involvement in 19 this case, had you ever been retained by 20 ARM before?</p> <p>21 A Not to my knowledge.</p> <p>22 Q Had you been retained by 23 ARM's counsel at Morrison & Foerster 24 before?</p> <p>25 A I have done some matters for</p>

4 (Pages 10 - 13)

<p style="text-align: right;">Page 58</p> <p>1 DR. RAVI DHAR 2 A Again, I don't keep track of 3 that. But I would say approximately a 4 third, you know, in that range, yeah. 5 Q And in how many of the cases 6 in which you served as an expert have you 7 opined on fair use? 8 A Fair use, might have opined, 9 you know, few times as one of the issues, 10 basically. 11 Q Do you consider yourself an 12 expert in fair use? 13 A So when I say I'm an expert, 14 I mean, you know, I don't know all the 15 legal theory behind fair use. So I had a 16 very clear instruction from counsel on 17 what to take into account. 18 And so my focus is really on 19 whether this is likely to be misleading 20 or false. And that's the part that I 21 opine on. But on the oral theory of fair 22 use, I would not call myself a legal 23 expert, you know, for anything. 24 Q Do you recall that you've 25 testified in the past that you are not an</p>	<p style="text-align: right;">Page 60</p> <p>1 DR. RAVI DHAR 2 point. 3 Q Is that a patent 4 infringement case? 5 A Correct, yeah. 6 Q What was the work you did in 7 that case? 8 A I think this was some kind 9 of rebuttal report, if I remember right, 10 yeah. 11 Q Do you remember what your 12 opinion was? 13 A No. I don't remember that. 14 Q Was it about trademark? 15 A No. It was about -- I think 16 it was about some aspects of technology. 17 Q But you don't remember what 18 aspects of technology? 19 A Correct. 20 Q Do any of these cases 21 involve the microprocessor industry? 22 A I think they probably do, 23 like the 23, it's a smartphone case. So 24 I'm sure there's microprocessors. My 25 role was not on that. But clearly, they</p>
<p style="text-align: right;">Page 59</p> <p>1 DR. RAVI DHAR 2 expert in fair use? 3 A It's possible. As I just 4 said, I'm certainly not a legal expert on 5 fair use based on the instructions given 6 to me. What's part of fair use, I opined 7 on that. 8 Q Did any of these cases in 9 which you served as an expert over the 10 last several years involve the 11 semiconductor industry? 12 A I have to look. There was 13 an IBM case that I recalled. Sorry. 14 This is appendix -- 15 Q This is Exhibit B. It's 16 appendix in the reply only. 17 A Semiconductor industry, 18 okay, not in this list. 19 Q What about the 20 microprocessor? 21 A Oh, sorry. I turned the 22 page. So the parallel, you know, IBM, 24 23 on my list had some aspects of 24 technology. I don't know if it was 25 semiconductors directly or not at this</p>	<p style="text-align: right;">Page 61</p> <p>1 DR. RAVI DHAR 2 had microprocessors in it. 3 Q What was your role in that 4 case? 5 A That case was a patent 6 infringement case. So basically, 7 something around the value of infringing 8 features kind of things. 9 Q So you were giving an 10 opinion on the value to a brand of 11 features that were patented? 12 A Or there was dispute whether 13 these features -- I guess the patent 14 infringement has the first piece, whether 15 it does infringe the patent or not. And 16 then if it does, what might be the value 17 of the features. So I was mostly on the 18 second part, yeah. 19 Q Understood. 20 I'm going to summarize by 21 saying you've had a lot of opinions about 22 brand strength; is that right? 23 A Yes. 24 Q What do you typically do to 25 assess brand strength?</p>

<p style="text-align: right;">Page 62</p> <p>1 DR. RAVI DHAR 2 A So very similar to what I 3 did here, which is basically, you know, 4 you think about strength as being 5 strength in the marketplace, which is a 6 commercial strength, which is looking at, 7 you know, typical factors. Things I look 8 at would be how long it's been using it, 9 is anybody else using a similar mark, 10 then going to the share, the sales, the 11 size, the awards that I mentioned, 12 recognition, and then how -- and looked 13 at sort of here, how the medias are 14 described. So multiple ways in the 15 aggregate that I look at.</p> <p>16 Q Have you ever considered 17 consumer-based evidence in determining 18 the strength of a brand?</p> <p>19 MR. FUNG: Objection, form.</p> <p>20 A I might have. I have to 21 think through it, but typically not, 22 because first, it's not required. And 23 secondly, a lot of the additional factors 24 that I just mentioned, they all go to the 25 commercial strength. And the surveys are</p>	<p style="text-align: right;">Page 64</p> <p>1 DR. RAVI DHAR 2 A So there can be many 3 types -- I think the commercial strength 4 is a consumer-based evidence of the 5 aggregate because what you have is, okay, 6 if this is the market share of the 7 addressable market or this is what 8 they're selling, that's aggregating. 9 Again, for this purpose, I 10 use the word consumer, customer, sort of 11 some interchangeably. If you're 12 referring to customer, I don't opine that 13 the end consumer knows Qualcomm or ARM. 14 And so consumer -- customer-based 15 evidence could be in the aggregate, which 16 is like how much have they sold, how much 17 recognition have they received, how long 18 they have been operating, are there 19 similar things that might potentially 20 lead people to be confused.</p> <p>21 Q In connection with your 22 brand strength opinions, have you opined 23 on what affiliations consumers or 24 customers might have with a particular 25 brand?</p>
<p style="text-align: right;">Page 63</p> <p>1 DR. RAVI DHAR 2 more useful when you're trying to 3 classify a certain magnitude. 4 So, for example, if there's 5 an issue around, is the brand famous, 6 which is basically an extension of the 7 strength, to certain level of threshold 8 and among the broader population. I 9 think that's when a survey, you might 10 require -- sometimes you don't even 11 require there because everybody would 12 agree that Apple is famous. 13 So I think I might have said 14 that in an Apple brand that Apple is 15 famous. And you don't need to do it, 16 survey for that, similar to the factors 17 that I mentioned, look at the sales of 18 Apple, look at a number of years, and 19 nobody else uses that, and share, all the 20 factors that we just discussed. 21 Q I asked you a question about 22 consumer-based evidence, and you 23 responded by describing surveys. 24 Are there other types of 25 consumer-based evidence besides surveys?</p>	<p style="text-align: right;">Page 65</p> <p>1 DR. RAVI DHAR 2 A When you say affiliation, 3 meaning? 4 Q I mean what a consumer 5 associates with a particular brand. 6 A I see. So I'll use the word 7 meaning, what means it has. Yes, I have 8 opined on, you know, like Apple would 9 mean to a lot of people or Nike would 10 mean, based on, you know, again, the 11 overall positioning. And the association 12 of the product would be the successful 13 strategy allows you to do that. 14 Q And you've never assessed 15 any evidence, beyond just looking at the 16 strategy of the company to determine what 17 the meaning would be of a brand? 18 A No. You would. You can, 19 you can. I mean it depends how important 20 that is. And as I said, we've had the 21 discussion earlier. I said the brand 22 strength, really, what matters here is 23 really on the identification side. And 24 then ARM is so well-known around, you 25 know, performance and power. And you see</p>

<p style="text-align: right;">Page 66</p> <p>1 DR. RAVI DHAR 2 it in everything, all the documents, all 3 the awards and all the associations they 4 do. 5 So there's enough 6 aggregation evidence that that's what ARM 7 stands for, you know, including -- 8 including what their offices would say. 9 So similarly with Apple, that Apple is 10 cool. I don't think you need to do a 11 survey because they'll be many other 12 points of evidence that would say awarded 13 the coolest brand of the year and so 14 forth.</p> <p>15 Q My question is, have you 16 never assessed any evidence to determine 17 the meaning of a brand, beyond looking at 18 the brand strategy?</p> <p>19 A No, no. Depends on what's 20 available. Like as I said, the survey 21 was not required here. And obviously, a 22 product has not been launched. So 23 setting that aside -- but there are many 24 documents.</p> <p>25 So, for example, in many</p>	<p style="text-align: right;">Page 68</p> <p>1 DR. RAVI DHAR 2 where it would be necessary because as I 3 said, many of the cases are more around 4 the identification and the strengths of 5 the market. In my academic and the 6 consulting work I have done, I've done 7 that. But I'm trying to think in the 8 legal setting. I might have. But 9 nothing readily comes to mind.</p> <p>10 Q You can't remember any 11 instance in which you've conducted a 12 survey in connection with your expert 13 work?</p> <p>14 A As far as the meaning of the 15 brand; right?</p> <p>16 Q Yes.</p> <p>17 A Nothing that comes to mind. 18 The surveys are really around -- around 19 specific issues of, you know, confusion. 20 So those are very standard sort of 21 questions. So they won't have a meaning 22 question. Brand dilution doesn't have a 23 meaning question. So nothing readily 24 comes to mind.</p> <p>25 Q I understand. So you</p>
<p style="text-align: right;">Page 67</p> <p>1 DR. RAVI DHAR 2 cases, there would be documents in the 3 ordinary course of business that would 4 have some information on what the ARM 5 brand stands for. And so you would look 6 at that. You wouldn't necessarily -- 7 that would be another point of consumer 8 data that you could have.</p> <p>9 Q What kind of documents are 10 you referring to?</p> <p>11 A So the documents I'm trying 12 to refer to is, which would often be 13 called a brand survey, done by companies, 14 called land tracking surveys.</p> <p>15 Q Have you relied on brand 16 surveys in the past to perform an opinion 17 about the meaning of a brand?</p> <p>18 A It would be one of the 19 inputs, yes. These are all data points 20 that I look at. And that would be 21 another data point.</p> <p>22 Q Have you conducted surveys 23 in the past to determine the meaning of a 24 brand?</p> <p>25 A I have to think through</p>	<p style="text-align: right;">Page 69</p> <p>1 DR. RAVI DHAR 2 mentioned that surveys are really around 3 specific issues of confusion.</p> <p>4 Have you conducted surveys 5 in connection with issuing an opinion on 6 the likelihood of confusion --</p> <p>7 MR. FUNG: Objection, form.</p> <p>8 Q -- in your expert work?</p> <p>9 A As I said, a survey is not 10 required. And here, the product was not 11 launched. But sometimes, when it's not 12 clearcut based on everything else, you 13 might want to see what the survey tells 14 us.</p> <p>15 Based on the data and the 16 documents I saw here, it was clear to me 17 that there's a likelihood of confusion.</p> <p>18 So setting aside the products not 19 launched, I didn't think you'd require a 20 survey.</p> <p>21 Q I'm not asking about your 22 work in this case, though.</p> <p>23 I'm just asking, generally, 24 have you conducted a survey to assess the 25 likelihood of confusion?</p>

18 (Pages 66 - 69)

<p style="text-align: right;">Page 70</p> <p>1 DR. RAVI DHAR 2 A Yes; in some matters; some 3 matters, not; sometimes, I have; many 4 matters, I have not. So it depends. 5 Q How many times do you think 6 you've conducted a survey? 7 A Hard to know. But I would 8 say one-third, I told you was roughly on 9 trademark, I would say, maybe less than 10 that, maybe a quarter of that. But I'm 11 just speaking from memory. 12 Q And why is a survey not 13 necessary in some cases? 14 A A survey is not necessary in 15 cases based on what other data points do 16 you have and what's available and what 17 kind of infringement it is. 18 So in this case, I think 19 it's very clear that this is infringing 20 on the ARM brand. And it has no other, 21 you know, understanding that I've seen, 22 including Dr. Steckel hasn't pointed to 23 anything I've seen, other than parroting 24 some points from a deposition. So I 25 didn't feel the need in this case to do</p>	<p style="text-align: right;">Page 72</p> <p>1 DR. RAVI DHAR 2 trademark that Qualcomm has done. And it 3 might continue to use it in many 4 different ways when the product is 5 launched. And so that's a challenge also 6 to do. But the first point is 7 independent of the second one. 8 Q What's the relevance of 9 whether the product has launched to 10 whether you conducted a survey? 11 A Well, in my mind, it's 12 really related to if you're looking for 13 confusion at the time of purchase, it 14 needs to be very close when all the 15 collaterals and marketing is done by 16 Qualcomm when they officially introduced 17 the chip. There might be other 18 collaterals. And that will also tell you 19 what that is and how it might be -- add 20 to the confusion or not. 21 Q So you would expect that 22 when Qualcomm actually introduces a chip 23 is when you would be able to assess 24 whether there's actual confusion? 25 MR. FUNG: Objection, form.</p>
<p style="text-align: right;">Page 71</p> <p>1 DR. RAVI DHAR 2 that. 3 Q When you say it's clear that 4 it's infringing, how are you using the 5 word infringing? 6 A I'm using it to mean that 7 there's a likelihood to see that it's 8 connected to ARM in terms of, you know, 9 connection with ARM as to, you know, 10 affiliation connection, some connection 11 with ARM brand on the licensing. 12 Q You understand that 13 infringing is a legal term; right? 14 A Yes. I'm using it legally. 15 Q You're not issuing a legal 16 opinion that Qualcomm has infringed ARM's 17 trademarks? 18 A Correct. I'm not, yeah. 19 Q You said that a survey is 20 not required here because the product was 21 not launched. 22 A No. Survey's not required 23 for making a judgment on confusion. 24 Second, a product is not launched here at 25 the moment. So there's current use of a</p>	<p style="text-align: right;">Page 73</p> <p>1 DR. RAVI DHAR 2 A You'd be able to -- closer 3 to the likelihood of purchasing 4 confusion. So right now, I'm testifying 5 that -- or I'm opining in my report that 6 based on the use of mark at present, 7 there's likely to be confusion. But I 8 don't know all the other things they 9 might do, between now and maybe summer of 10 2024, is my understanding, when it might 11 be officially introduced. And that will 12 have some impact on that as well. 13 Q What else could you do to 14 assess likelihood of confusion besides 15 conduct a survey? 16 A So we discussed this, you 17 know, what's done in the ordinary course 18 of business. You could look at how the 19 mark is, you know -- what I did, which is 20 look at how the mark is being used by 21 Qualcomm in terms of its press 22 statements, you know, earnings call, 23 press release, like the Snapdragon. So 24 those are all data points because these 25 are people talking about the product.</p>

19 (Pages 70 - 73)

<p style="text-align: right;">Page 74</p> <p>1 DR. RAVI DHAR 2 Q Have you assessed the 3 likelihood of confusion in a B2B brand in 4 the tech industry? 5 A Good question. I think I 6 might have. But it's hard to remember 7 sitting here. I don't recall. 8 THE WITNESS: Can we take a 9 break? 10 MS. MORGAN: Yes. We could 11 take a break right now. 12 THE VIDEOGRAPHER: Off the 13 record, 10:18 a.m. 14 (A short recess was taken.) 15 THE VIDEOGRAPHER: Back on 16 the record, 10:31 a.m. 17 Q Welcome back, Dr. Dhar. 18 A Thank you. 19 Q Let's look at paragraph 5 of 20 your report, your opening report. 21 A Yes. 22 Q You state here that your 23 expertise is in branding, consumer and 24 customer psychology, marketing 25 management, marketing strategy and survey</p>	<p style="text-align: right;">Page 76</p> <p>1 DR. RAVI DHAR 2 Q What's a field survey? 3 A Field survey means it's a 4 survey often done in the field, which 5 means really, you know, often real people 6 in like some experiments would be the 7 general idea. 8 Q Do you ever do customer 9 surveys? 10 A Yes. I've done customer 11 survey, mostly, you know, for the B2B, 12 you know. When I do consulting, for 13 example, at IBM, those are customer 14 surveys. And so that would be an example 15 of that. 16 Q How do you conduct a B2B 17 customer survey? 18 A So it's very similar to the 19 surveys we do for consumers, except you 20 have to recruit decision makers of that 21 product, which is a combination of people 22 who might be, let's call that, working in 23 IT, working in line of business, 24 C-suites. You need to have a mix of 25 people to make sure that you're getting</p>
<p style="text-align: right;">Page 75</p> <p>1 DR. RAVI DHAR 2 design, methodology and evaluation. Do 3 you see that? 4 A Yes. 5 Q Is your opinion in this case 6 in one of those fields? 7 A Yes. Customer decision 8 making, which is sort of covered under 9 customer psychology, you know, marketing, 10 strategy and so forth, branding, of 11 course. 12 Q How did you develop an 13 expertise in survey design? 14 A By doing so is for my 15 research and teaching as well. 16 Q What kind of surveys do you 17 conduct in your research? 18 A So all kinds. A lot of them 19 would be experiments which is also 20 randomized control design. But it could 21 be a field survey, in the field, and, you 22 know, surveying employees. I do some 23 work with Google where we survey 24 employees, for example. So all kinds of 25 surveys.</p>	<p style="text-align: right;">Page 77</p> <p>1 DR. RAVI DHAR 2 different types of opinions. 3 Q When you say you need to 4 recruit decision makers, what do you mean 5 by decision makers? 6 A So typically, that means 7 whatever the category might be that 8 you'll have what's called a screening 9 question or a qualifying question to say 10 where do you work, the size of the 11 company, and you might have a question 12 around what's your role, are you involved 13 in purchasing XYZ. And then if you're 14 most interested in Z, you would have some 15 questions, what's your role in that 16 purchase, were you one of the decision 17 makers, primary one, secondary or I had 18 no role in that. You just signed the 19 check, for example, for some C-suite 20 executive who may not be involved in that 21 decision making. But they're ultimately 22 paying for that. 23 Q And why is it important to 24 get decision makers for the survey? 25 A Because those are the</p>

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<p>1 DR. RAVI DHAR 2 relevant -- if you're doing a survey, 3 those are the relevant population for 4 whose opinions matter. 5 Q Opinions on what? 6 A On whatever the survey is 7 trying to do. 8 Q Could that kind of survey be 9 used to assess the meaning of a brand? 10 A If that's what you want to 11 do. As I said earlier, it's not really 12 required. But, yes, it could try to say 13 what is IBM branding to different people. 14 If that's your objective, you could do 15 that. 16 Q Could that kind of survey 17 that you've described also be used to 18 assess likelihood of confusion related to 19 a brand? 20 A It could. Again, depending 21 if you feel it's required as I said, I 22 don't think a survey is required in this 23 matter or in many matters for that 24 matter. But if you did do a survey, you 25 would want to do it with the kind of</p>	<p>Page 78</p> <p>1 DR. RAVI DHAR 2 theories is around sort of some 3 verification with some set of knowledge 4 people might have. So we are judging 5 something, is it an authentic leader or 6 authentic in certain other aspects. So 7 you have certain value criteria around 8 which you judge whether or not somebody 9 is authentic. 10 And, of course, this 11 criteria can change over time. But the 12 general idea being that -- so the example 13 in one of my projects right now that I'm 14 doing, somebody who goes to restaurants, 15 Italian restaurants and doesn't really 16 know what are the ingredients, how it's 17 made, whether it's grade authentic 18 Italian. But when they visited Italy and 19 they came back, that suddenly changed 20 their opinion and evaluations because now 21 their definition of authenticity was, oh, 22 so they don't really do this or they 23 don't make a bread or they don't put 24 mozzarella in a way that pizza might be 25 used in this case. So authenticity is</p>
<p>1 DR. RAVI DHAR 2 people we discussed. 3 Q With decision makers? 4 A Correct, yeah. 5 Q And that's because decision 6 makers are the people whose opinions are 7 relevant to likelihood of confusion? 8 A Correct, yeah. 9 Q Are there any areas of 10 expertise that you have that are not 11 listed here? 12 A It's different words. We 13 have economics, we have science. And 14 this is at a high level. But if you go, 15 sort of slice that, you might list, you 16 know, other areas; for example, 17 authenticity, I do a lot of work on 18 authenticity. It's not listed here. But 19 to me, ladder up to somewhere on customer 20 or consumer psychology. 21 Q What does authenticity mean 22 in your field? 23 A That could be a whole 24 dissertation. There are many theories 25 around authenticity. But one of the</p>	<p>Page 79</p> <p>1 DR. RAVI DHAR 2 dynamic because it could change based on 3 the criteria that I use. That might 4 change itself, yeah. 5 Q That's very interesting. 6 Thank you for indulging me. 7 Are you an expert in the 8 area of legal damages? 9 A Certainly not legal damages. 10 What I do might have implications for 11 that. But I'm not a damages expert. 12 Q When you say what you do 13 might have implications for that, what do 14 you mean? 15 A So typically, some work in 16 the patent cases I might do on how 17 features are important to consumers. The 18 damages expert might take that into 19 account in whatever they do. 20 Q You're not a technical 21 expert; right? 22 A Correct. 23 Q And you didn't read any 24 source code in this case? 25 A That's correct.</p>

<p>1 DR. RAVI DHAR 2 Q You wouldn't want to read 3 any source code. 4 A Lots of zeroes and ones or 5 more than that, I don't know, yeah, not 6 read. 7 Q Let's go to paragraph 9 8 which is on the same page. 9 A Okay. 10 Q This is your assignment in 11 this matter; right? 12 A I kind of came up with this 13 assignment based on the question, which 14 is the way that I normally approach 15 matters like this, starting with the 16 strength of the mark, is it enough and 17 distinctive, is it likely to, you know, 18 lead to confusion and then if that 19 confusion is likely to lead to harm. 20 Q At the beginning of 21 paragraph 9, you say you were asked to 22 opine from a marketing and consumer 23 behavior perspective on the following 24 issues. 25 What does it mean to opine</p>	<p>Page 82</p> <p>1 DR. RAVI DHAR 2 little bit earlier. 3 But what's the distinction 4 between a strong mark and a strong brand? 5 A So to me, as I said, the 6 brand has a broader meaning around 7 identification and then, you know, 8 associations, if you like, for marketing. 9 And the mark is also like a trademark, 10 you know, which is a specific 11 registration and might have some legal 12 meaning also. 13 So to me, you know, I've 14 used -- I focused really on the ARM 15 brand. It's the word mark ARM if you'd 16 like. So I see the two are related. But 17 ultimately, marketing, look at the 18 identification and what it stands for. 19 Q You said brand has a broader 20 meaning around identification and 21 associations for marketing. 22 Does a trademark have 23 meaning around identification and 24 associations for marketing? 25 A So trademark, again, if it's</p>
<p>1 DR. RAVI DHAR 2 from a marketing and consumer behavior 3 perspective? 4 A So that's again sort of set 5 language that I use, meaning it's not a 6 legal opinion. And I'm providing this 7 based on how a marketing expert would 8 look at it. 9 Q The first question that's 10 listed here, the first issue that's 11 listed here is the benefit of a strong 12 mark or brand in the marketplace. 13 What do you mean by benefit 14 in this context? 15 A So I just mean that like why 16 do companies try to, you know -- whether 17 companies want a strong brand. So 18 obviously, brand building has investments 19 and resources, both financial money and 20 time. So there must be some benefit to 21 companies to do that, one of the benefits 22 of the company. 23 Q And you used the word brand 24 here, a strong mark or brand in the 25 marketplace. We talked about this a</p>	<p>Page 83</p> <p>1 DR. RAVI DHAR 2 used as brand, but I meant when trademark 3 is used as legal, I often see them 4 focused on the source identifier aspect 5 of it. And maybe if they talk about some 6 harm, they might talk about some loss of 7 control and negative associations. 8 But more generally, I see a 9 lot of focus on identification, does 10 source affiliation or connection 11 permission related to the brand. Not so 12 much in the meaning -- and you asked me 13 this question earlier. And I said 14 typically, litigation. I haven't seen 15 much discussion around the meaning of the 16 brand as a central, you know, it comes up 17 in certain areas like dilution, but not 18 typically in confusion that I've been 19 involved with. 20 Q You mentioned a marketplace 21 in this issue. 22 A Right. 23 Q What's the marketplace 24 you're referring to? 25 A So basically, marketplace</p>

22 (Pages 82 - 85)

<p style="text-align: right;">Page 86</p> <p>1 DR. RAVI DHAR 2 context to me means like, you know, 3 because this is -- products, they operate 4 in a product market, in a certain 5 context. So in this case, it's a B2B 6 marketplace context. And so the contexts 7 of the marketplace varies across 8 products. So that's what I mean.</p> <p>9 Q What's the B2B marketplace 10 that's relevant in this case?</p> <p>11 A So I think in this case, 12 largely speaking, it's the customers of 13 Qualcomm. So customers, semiconductor 14 industry, semiconductor industry and 15 customers of ARM. So I think those are 16 two different relevant marketplaces here.</p> <p>17 Q Are customers of ARM in the 18 semiconductor industry in your definition 19 of that industry?</p> <p>20 A Yes. Customers of ARM would 21 be in the semiconductor industry.</p> <p>22 Q Do you understand ARM to be 23 a semiconductor designer?</p> <p>24 MR. FUNG: Objection to 25 form.</p>	<p style="text-align: right;">Page 88</p> <p>1 DR. RAVI DHAR 2 including what Qualcomm manufactures. 3 Q So you don't understand ARM 4 and Qualcomm to do the same thing? 5 A That's right.</p> <p>6 MR. FUNG: Objection to 7 form.</p> <p>8 A ARM does not manufacture.</p> <p>9 Q Are there any other 10 distinctions that you could think of 11 between ARM's business and Qualcomm's 12 business?</p> <p>13 MR. FUNG: Objection, form.</p> <p>14 A I don't know the full scope 15 of, you know, either of the company's 16 businesses. But I understand, you know, 17 the business models are different 18 potentially. ARM is a licensed server. 19 Primarily, most of their revenues comes 20 from licensing, whether it's royalties or 21 fees. And Qualcomm might have different 22 revenue models for its customers.</p> <p>23 Q The second issue on 24 paragraph Subsection B --</p> <p>25 A Sorry. Subsection B?</p>
<p style="text-align: right;">Page 87</p> <p>1 DR. RAVI DHAR 2 A Manufacturing, semiconductor 3 manufacturing, yeah. And I assume it 4 also designs as a result of that, yeah.</p> <p>5 Q Do you also understand 6 Qualcomm to be a semiconductor designer?</p> <p>7 A I thought I was answering to 8 Qualcomm. I might have answered for ARM.</p> <p>9 Q Yes.</p> <p>10 I said, do you understand 11 ARM to be a semiconductor designer?</p> <p>12 A So it's a designer of the 13 process, of course, which is part of what 14 goes into the CPUs of the semiconductors.</p> <p>15 But they don't manufacture. So I said 16 manufacturing. I was thinking of 17 Qualcomm.</p> <p>18 Q So just to recap, what do 19 you understand Qualcomm to do?</p> <p>20 A So I understand Qualcomm to 21 be, you know, in the semiconductor 22 industry where it manufactures chips, 23 systems on chips. And, of course, there 24 are many, many other semiconductors that 25 might be in the ultimate devices,</p>	<p style="text-align: right;">Page 89</p> <p>1 DR. RAVI DHAR 2 Q Yes, B, is whether ARM's 3 trademarks and brands are distinctive and 4 strong in the United States marketplace 5 context. Do you see that?</p> <p>6 A Yes.</p> <p>7 Q Are the trademarks that 8 you're referring to the two marks that 9 you've described in paragraph 7?</p> <p>10 A Yes. And the word mark, the 11 brand is, of course, ARM. But trademark 12 would be in a specific font style and so 13 forth.</p> <p>14 Q What do you mean when you 15 refer to the United States marketplace 16 context?</p> <p>17 A Oh, I just meant that 18 because it's global companies, both of 19 them. I'm just focused on the U.S. 20 markets here.</p> <p>21 Q So the brand strength, 22 outside of the United States, is not 23 relevant to your opinion?</p> <p>24 A Because that was my 25 understanding of a case, a U.S. case. So</p>

23 (Pages 86 - 89)

<p>1 DR. RAVI DHAR 2 I think a lot of it applies everywhere. 3 But I focused on the U.S. market. 4 Q What's the distinction 5 you're drawing between distinctive and 6 strong? 7 A So basically, strong, as I 8 said, can refer to often, the commercial 9 strength that we went through, sales 10 share, you know, number of years in the 11 market, awards, recognition. And 12 distinctiveness is often, are there other 13 similar marks in that industry that can 14 affect like, well, there's another one 15 that uses ARM with a slightly, you know, 16 different thing. So it's often part of 17 commercial versus conceptual, if you'd 18 like, the distinctiveness, like unique is 19 the mark, if you'd like, compared to any 20 other players in the semiconductor 21 industry. 22 Q So strength refers to 23 commercial strength, and distinctiveness 24 is more conceptual? 25 A I think strength has two</p>	<p>Page 90</p> <p>1 DR. RAVI DHAR 2 Q How did you come to the view 3 that Qualcomm's use of ARM's trademarks 4 is unlicensed? 5 A So, you know, I say in 6 Footnote 3 below that I understand that 7 the license was terminated. And Qualcomm 8 has its own license or ALA with ARM. But 9 ARM's position is that this was based on 10 the IP work that was done on the Nuvia 11 products and then transferred when 12 Qualcomm acquired. But I don't offer an 13 opinion on that. That's an assumption. 14 And that's through counsel which is what 15 Footnote 3 refers to here. 16 Q So you were asked to assume 17 that ARM's position on whether Qualcomm's 18 use of ARM's trademark is licensed is 19 valid? 20 That was not a good 21 question. Let me ask that in a different 22 way. 23 You were asked to assume 24 that Qualcomm's use of ARM's trademark is 25 unlicensed?</p>
<p>1 DR. RAVI DHAR 2 components so it. One is commercial, and 3 one is conceptual. And oftentimes, 4 strength has both components to it. And 5 commercial is one component. And 6 conceptual is another word. And that 7 conceptual is often thought of as 8 distinctiveness. 9 Q The next issue that you have 10 as part of your assignment in Subsection 11 C -- 12 A Yes. 13 Q -- says whether Qualcomm's 14 unlicensed use of the ARM trademarks in 15 connection with Nuvia products, i.e., 16 technology that encompasses Nuvia 17 technology developed [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] And then you have 23 an additional parenthetical there. Do 24 you see where I am? 25 A Yes.</p>	<p>Page 91</p> <p>1 DR. RAVI DHAR 2 MR. FUNG: Objection, form. 3 A I was asked to assume that 4 Qualcomm's use was -- yes. It was not 5 based on -- based on the license that was 6 provided to Nuvia. And these products 7 were based on the Nuvia technology. 8 Q But [REDACTED] [REDACTED]; right? 11 A Well, I'm offering an 12 opinion [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] So I'm 20 saying that the use [REDACTED] [REDACTED] But I assume that use [REDACTED] [REDACTED] [REDACTED] 25 Q Right.</p>

24 (Pages 90 - 93)

<p style="text-align: right;">Page 122</p> <p>1 DR. RAVI DHAR 2 Q What other case studies can 3 you remember that relate to the 4 semiconductor industry or B2B brands in 5 the semiconductor industry? 6 A So I've done some cases on, 7 you know, memory chips, like LSI. I 8 don't know if LSI still exists, advanced 9 materials, semiconductor equipment 10 manufacturers. So when I used to teach 11 marketing strategy, I would do cases on 12 those semiconductor chips and chip 13 industry. So that's one more example. 14 Q Do you think that you 15 applied knowledge from the Intel or LSI 16 case studies in issuing your opinions? 17 A No, not at the specific 18 level of those. 19 Q What specific experience in 20 marketing and branding did you rely on in 21 issuing your opinions? 22 A Well, I mean I cite the 23 process which is well-established 24 framework and principles. But I also 25 have knowledge in terms of working with</p>	<p style="text-align: right;">Page 124</p> <p>1 DR. RAVI DHAR 2 business for Cisco. I did some work with 3 HP. HP has a business to business part. 4 But they are sort of what could be called 5 core customers. I don't think HP makes 6 chips, makes the boxes, I think, and 7 other things. But I don't think they 8 make the chips. 9 Q So you have experience in 10 evaluating customer behavior of 11 purchasers of semiconductors, but not of 12 semiconductor manufacturers? 13 MR. FUNG: Objection, form. 14 A So not the R&D people, you 15 know. But people who are buying or 16 selling to both sides, I would have 17 probably looked at that, like who's 18 buying from them and who's selling. That 19 would be relevant here. So I looked at 20 the buyer side, like what do the buyers 21 consider, and then what are the sellers, 22 also, so way of sellers, if you like. 23 Q Who are the buyers that 24 you're referring to? 25 A So it would vary by the</p>
<p style="text-align: right;">Page 123</p> <p>1 DR. RAVI DHAR 2 very large companies on branding. So 3 that influences how I think about it, but 4 not anything specific from that case and 5 said, hey, let's apply that here. 6 Q Do you have any experience 7 with evaluating the behavior of customers 8 for CPUs? 9 A Value the behavior, not 10 specifically at that level. 11 Q What experience do you have 12 with evaluating customer behavior in the 13 semiconductor industry, generally? 14 MR. FUNG: Objection, form. 15 A So more in the tech 16 industry. As I said earlier, I have, you 17 know, looked at Cisco, IBM. And IBM had 18 a semiconductor business. I don't know 19 if they still have it or not. 20 And so part of that 21 industry, I would look at different, you 22 know, verticals. I mentioned generative 23 AI as one example, business analytics. 24 They have lots of different businesses. 25 So I would have looked at business to</p>	<p style="text-align: right;">Page 125</p> <p>1 DR. RAVI DHAR 2 product market. So depending on the 3 consulting assignment. I recently looked 4 at wireless networks, for example, who's 5 buying the wireless network kind of thing 6 and who are the buyers and what do they 7 care about. 8 Q That's not specifically 9 about the semiconductor industry? 10 A No. That's about the land 11 equipment, which would be where the 12 semiconductors might go in, not 13 specifically on semiconductors. 14 Q Are there any specific 15 experiences that you've had that you view 16 as similar to the facts in this case? 17 MR. FUNG: Objection, form. 18 A Each case is different. So 19 it's hard to -- I mean my role is 20 similar, which is that's why when we had 21 the discussion on the assignment, I said, 22 you know, that was the assignment I 23 proposed to counsel based on what I do is 24 a strength of the mark and the benefits 25 of the brand. So my role is similar.</p>

<p style="text-align: right;">Page 126</p> <p>1 DR. RAVI DHAR 2 But the case is much bigger than my role. 3 So I don't have an opinion on that. 4 Q In paragraph 13, you 5 say, "Based on my knowledge and 6 experience, well-established principles 7 of branding, my analysis of documents and 8 testimony provided to me by counsel and 9 cited herein and my own independent 10 research, my conclusions are as follows." 11 We've talked now about your 12 knowledge and your experience. 13 A Yes. 14 Q And we talked about the 15 documents and the testimony that you 16 reviewed. 17 What are the 18 well-established principles of branding 19 you relied on? 20 A So I have a whole section of 21 what a brand is, what the strength is and 22 how do you measure the brand strength. 23 Those are well-established principles. 24 When I told you earlier, the sales, the 25 share, the recognition, and we had a</p>	<p style="text-align: right;">Page 128</p> <p>1 DR. RAVI DHAR 2 this report on the principles of branding 3 that you cite? 4 A I mean I know most of this, 5 you know. So I went back to the thing. 6 So when you say research, you mean 7 looking at the papers or did you mean 8 speak to somebody? 9 Q I guess I mean anything. 10 A Okay. So, yes, so the 11 answer would be yes because I would go 12 back to the papers and the ones I'm 13 citing and I'm doing research and looking 14 up how it's being used. We had this 15 discussion earlier on, multiple ways in 16 which, you know, Qualcomm was using it. 17 I did research on that and gave some 18 illustrative examples that I expanded on 19 in my reply report. 20 But that's another example 21 of research. The research was both 22 looking at the academic side, but also 23 looking at how it's looking at the 24 awards, the list of awards, what were the 25 awards for, what they were doing. That</p>
<p style="text-align: right;">Page 127</p> <p>1 DR. RAVI DHAR 2 discussion on when I looked at, is Apple 3 a strong brand. I did a very similar set 4 of things. So those are well-established 5 principles, to measure the commercial 6 strength of a brand here. 7 Q Are the well-established 8 principles of branding set forth in 9 paragraphs 79 to 92 of the report? 10 A Yeah. I mean they're all 11 over. They keep going on, the length of 12 relationships and when I provide the data 13 and awards. I wouldn't say they are 14 limited to that, but they're all sort of, 15 you know, listed in different places. 16 When I say -- when I looked at, you know, 17 how many units were shipped, for example, 18 30 billion, the size of the market. And 19 those paragraphs are somewhat later. So 20 I would say it's sprinkled everywhere. 21 Q Did you do research on the 22 principles of branding which you relied 23 on in your report, for this report? 24 A Sorry. Did I do? 25 Q Did you conduct research for</p>	<p style="text-align: right;">Page 129</p> <p>1 DR. RAVI DHAR 2 was part of the research. 3 Q Did you do any research that 4 you didn't write about in your report? 5 MR. FUNG: Objection to 6 form. 7 A No. But as I mentioned, I 8 did mention all the articles that I 9 found. So that would be an example where 10 I didn't write about it because it was 11 more of the same as opposed to different 12 research. 13 Q Did you conduct a survey in 14 this case and not disclose it in your 15 report? 16 A No, because as I said, you 17 know, A, the product is not being 18 launched. So, no, I did not conduct a 19 survey. 20 Q Did you talk to any ARM 21 customers in connection with your 22 research on this report? 23 A No. Only I reviewed, you 24 know, where they might have been deposed, 25 if there was anyone like that, but not --</p>

<p style="text-align: right;">Page 130</p> <p>1 DR. RAVI DHAR 2 I did not personally have a conversation. 3 Q Do you think any ARM 4 customers were deposed in this case? 5 A Well, your client. 6 Q Besides Qualcomm. 7 A That's a good question. I 8 mean I know people moved around. 9 Mr. Sharma was at different places, 10 including ARM I think at one time, and 11 Qualcomm. But whether other companies 12 have been deposed, I don't think I saw 13 that.</p> <p>14 MS. MORGAN: I can go for 15 like ten more minutes, or we could 16 take a break. What do you want to 17 do?</p> <p>18 THE WITNESS: Let's take a 19 break.</p> <p>20 THE VIDEOGRAPHER: Off the 21 record, 11:28 a.m.</p> <p>22 (A short recess was taken.)</p> <p>23 THE VIDEOGRAPHER: Back on 24 the record, 11:44 a.m.</p> <p>25 Q Welcome back, Dr. Dhar.</p>	<p style="text-align: right;">Page 132</p> <p>1 DR. RAVI DHAR 2 knowledge, I would have personally 3 reviewed these documents? 4 Q Right. 5 But you didn't have prior 6 knowledge of reviewing the documents in 7 the information background section? 8 A I think that's correct. 9 Q Are the background facts 10 part of your opinions in this case? 11 A No. I think the background 12 facts, I would call them, baseline 13 foundation knowledge kind of a thing. 14 Q Do you understand any of the 15 facts in the background section to be in 16 dispute? 17 A I mean one of the things we 18 already discussed, I don't know if the 19 background gets into it in more details, 20 which is that the license is -- we 21 discussed earlier on termination and 22 [REDACTED] [REDACTED] So to me, if that's 25 also here, which it might be, I haven't</p>
<p style="text-align: right;">Page 131</p> <p>1 DR. RAVI DHAR 2 A Thank you. 3 Q I'm looking now at your 4 background section which starts on page 5 10 of your opening report. 6 A Yes. 7 Q And it goes all the way to 8 page 24. 9 This section contains 10 background information about the case 11 based on your read of documents and 12 deposition testimony; right? 13 A I think that's correct. Let 14 me quickly look at them. 15 Q Sure. 16 A Right. It has some 17 information also on the size and sales at 18 ARM. But it's the background information 19 also, yes. 20 Q None of that information is 21 based on your personal knowledge; right? 22 It's based on your review of documents 23 and testimony? 24 A Based on reviewing the 25 documents. When you say personal</p>	<p style="text-align: right;">Page 133</p> <p>1 DR. RAVI DHAR 2 gone through it, we discussed earlier, 3 Qualcomm disputes that. 4 Q Let's look at paragraph 21. 5 You write here, "Software 6 developers write software for ARM-based 7 devices," the beginning of that sentence. 8 Do you see that? 9 A Yes. 10 Q This is a quote from ARM's 11 SEC Form 424B4; right? 12 A Yes. 13 Q What does [REDACTED] mean? 14 A So this is one of the 15 opinions I opined that, to me, what I've 16 said based on the use of the word [REDACTED] [REDACTED] [REDACTED] [REDACTED]. 23 Q How did you establish that 24 [REDACTED] means [REDACTED] 25 MR. FUNG: Objection, form.</p>

<p>1 DR. RAVI DHAR 2 can repeat the answer. 3 Q You're giving answers that 4 are not responsive to the questions. 5 A I'm happy to repeat the 6 answers. 7 MR. FUNG: Counsel, just 8 state the question. 9 A Yeah. Just state your 10 question. 11 Q The question is -- I want to 12 be clear that I will seek more than seven 13 hours with you if you can't answer these 14 questions. I will petition the court. 15 A You can do what you like. 16 MR. FUNG: Just ask the 17 question. Don't lecture the witness. 18 Q The question is, you would 19 have to examine a specific B2B 20 transaction in order to understand what 21 information a decision maker relied on in 22 that transaction? 23 A I don't know what 24 transaction you're talking about. 25 MR. FUNG: Objection to</p>	<p>Page 218</p> <p>1 DR. RAVI DHAR 2 paragraph, "B2B products are generally 3 purchased by a group within an 4 organization, rather than a single 5 individual, and as such, can be subject 6 to complex within firm restrictions and 7 negotiations." 8 Do you see that? 9 A Yes. 10 Q How does that impact the 11 buying process for a B2B brand? 12 A So, again, in a specific 13 case like this, it does not affect any of 14 the things I said, which is ARM-based and 15 ARM compliant is misleading and false. 16 What this is referring to is that the 17 process might play out over a certain 18 time frame. They might have some 19 back-and-forth. 20 Q Are you relying on 21 principles about B2B brands generally in 22 your report? 23 A I'm relying on the fact that 24 B2B is more sophisticated. And it would 25 make no difference, yes.</p>
<p>1 DR. RAVI DHAR 2 form; objection, asked and answered. 3 A In this case, I did not need 4 to rely on the answer that I already 5 gave, that ARM-based, non-compliant and 6 ARM have a false and misleading 7 information if there's no license, that 8 it uses the ARM brand. 9 Q When you said it depends 10 even in B2B, whether you're buying paper 11 cups or not, what did you mean? 12 A It means what is the overall 13 set of information they would consider. 14 I don't need to know all the overall set 15 of information that they're considering. 16 And here, they'll be other 17 information they'll also consider. It's 18 not just about whether it's misleading 19 and false about ARM license. There are 20 other information in the chip and that 21 they would consider. I don't need to 22 know that to know that this particular 23 information is false and misleading. 24 MS. MORGAN: Move to strike. 25 Q You also state in this</p>	<p>Page 219</p> <p>1 DR. RAVI DHAR 2 Q It makes no difference 3 whether it's a B2B transaction or a B2C 4 transaction? 5 A It makes no difference in 6 terms of the false and misleading 7 information that the customer is 8 sophisticated would not change that 9 [REDACTED]. 11 Q You don't actually have the 12 technical expertise to evaluate whether 13 anything Qualcomm has said about any of 14 its products is false and misleading, do 15 you? 16 MR. FUNG: Objection, form. 17 A As I said, we made certain 18 assumption. I don't -- I know that ARM 19 doesn't have the proper license. I was 20 asked to assume that. So under that 21 assumption, it's simply false and 22 misleading. If that assumption is 23 incorrect, the lawyers on two sides will 24 fight it out. But if it does not have a 25 license, then the use of [REDACTED]</p>

<p style="text-align: right;">Page 222</p> <p>1 DR. RAVI DHAR 2 [REDACTED] [REDACTED]</p> <p>4 Q You would agree that 5 Qualcomm and ARM both sell complex 6 products; right?</p> <p>7 MR. FUNG: Objection, form.</p> <p>8 A I mean they sell products. 9 We already discussed what they are, 10 labeling as complex. I don't know what 11 that adds.</p> <p>12 Q You don't know if they're 13 complex?</p> <p>14 MR. FUNG: Objection.</p> <p>15 A I mean products, they're 16 complex, certainly compared to buying an 17 ice cream and a candy, yes. So it just 18 depends. I don't have -- compared to 19 buying a pair of sneakers, yes, they're 20 complex.</p> <p>21 Q And both Qualcomm and ARM 22 sell their products to businesses as part 23 of complex transactions; right?</p> <p>24 MR. FUNG: Objection, form.</p> <p>25 A They have some negotiations,</p>	<p style="text-align: right;">Page 224</p> <p>1 DR. RAVI DHAR 2 opinions are, the way that Qualcomm 3 describes it right now in the different 4 places, including the events, Snapdragon 5 and Summit, the press, to the financial 6 investors, that ARM -- that the terms 7 that are being used about ARM-based, ARM 8 is false and misleading.</p> <p>9 Q Have you researched as part 10 of your work in this case who Qualcomm's 11 customers are?</p> <p>12 A Qualcomm's customers, we 13 discussed earlier, would be businesses 14 that are making certain devices and so 15 forth, yeah.</p> <p>16 Q What research did you do to 17 establish that?</p> <p>18 A I looked at some of these 19 materials and depositions. But I don't 20 know all the lists of the customers.</p> <p>21 Q Have you reviewed Qualcomm's 22 marketing materials that were provided to 23 customers in connection with any of its 24 products that you referred to as the 25 Nuvia products?</p>
<p style="text-align: right;">Page 223</p> <p>1 DR. RAVI DHAR 2 correct.</p> <p>3 Q And the decision makers in 4 situations where Qualcomm sells its 5 products and where ARM sells its products 6 have technical knowledge about the 7 products?</p> <p>8 MR. FUNG: Objection, form.</p> <p>9 A Yes.</p> <p>10 Q And the decision to buy a 11 Qualcomm product or an ARM product is 12 typically made by groups of decision 13 makers, not one person; right?</p> <p>14 MR. FUNG: Objection, form.</p> <p>15 A They might have a buying 16 center, yes.</p> <p>17 Q What did you do in this case 18 to learn about the purchase process for 19 Qualcomm's products?</p> <p>20 A You mean the products that 21 Qualcomm makes?</p> <p>22 Q Yes.</p> <p>23 A Yes. So as I said, it's not 24 in the market yet. So I haven't looked 25 at that. But based on the way my</p>	<p style="text-align: right;">Page 225</p> <p>1 DR. RAVI DHAR 2 A Yes. I looked at the 3 spreadsheets and other things. But as I 4 said, the product has not been launched 5 yet. And I also looked at the events, 6 the Snapdragon Summit, what are the press 7 releases and information that they 8 provided broadly to the market and to the 9 community. I looked at that.</p> <p>10 Q Is it your understanding 11 that information that's provided broadly 12 to the market and to the community is the 13 same information that's provided to 14 customers as part of a sales pitch?</p> <p>15 MR. FUNG: Objection, form.</p> <p>16 A No. It's part of it. And 17 then I mentioned the specification sheets 18 and other things also provided.</p> <p>19 Q And do you have the 20 technical expertise to read those?</p> <p>21 MR. FUNG: Objection, form.</p> <p>22 A I was not evaluating all the 23 things. My focus is somewhat 24 straightforward, which is the use of 25 [REDACTED]</p>

<p style="text-align: right;">Page 226</p> <p>1 DR. RAVI DHAR 2 [REDACTED] [REDACTED]</p> <p>4 Q You said in response to my 5 question about whether you had looked at 6 Qualcomm's marketing materials, that the 7 product has not been launched yet. 8 What do you expect to change 9 when the product is launched?</p> <p>10 A It's a good question. I 11 don't know the answer because in the 12 responses, Qualcomm I think -- ARM asked 13 if you would continue to, you know, some 14 questions around how would you use the 15 ARM mark. And I think Qualcomm's 16 response was that they didn't answer the 17 question, is my memory. So, in other 18 words, I don't know the answer in all the 19 ways that they would use it.</p> <p>20 Q Have you examined how long 21 Qualcomm's sales process takes?</p> <p>22 A No, I have not.</p> <p>23 Q Have you researched who the 24 decision makers are at Qualcomm's 25 customers?</p>	<p style="text-align: right;">Page 228</p> <p>1 DR. RAVI DHAR 2 series of this. And I don't know if 3 they're all in the same categories or 4 different ones. 5 Q You don't know what all the 6 markets are that Qualcomm's chips are in? 7 MR. FUNG: Objection. 8 A Sitting here, I don't recall 9 all of them. 10 Q What did you do to learn 11 about the purchase process for ARM's 12 products? 13 MR. FUNG: Objection, form. 14 A So, again, my focus was 15 really not on -- you mean ARM's 16 customers? Yeah. That was not my main 17 focus, to look at how ARM's products are 18 purchased. 19 Q So you didn't take any steps 20 to understand how ARM's products are 21 purchased? 22 MR. FUNG: Objection, form. 23 A Well, I looked at some of 24 the stuff that talks about Mr. Amon 25 saying when he uses ARM products versus</p>
<p style="text-align: right;">Page 227</p> <p>1 DR. RAVI DHAR 2 A Not specifically. But it 3 would be a buying center again, a team. 4 Q What do you mean by a buying 5 center? 6 A Which just means a 7 collection of people who can be from 8 slightly different functional areas. 9 Q What functional areas are 10 Qualcomm's decision makers made up of? 11 A So it'll depend on the 12 products. I've done extensive work in 13 this area I've told you before with IBM. 14 So it depends for business analytics 15 product or Gen AI. But it's a 16 combination of somebody from corporate 17 IT, somebody from a business person, 18 somebody from a CIO's office. It could 19 be a combination of people like that. 20 Q Do you know what market the 21 Snapdragon Elite chip is in? 22 A So Snapdragon is, I think, 23 in a lot of the products like PC 24 computer, you know, laptop, those kind of 25 products as well. But they have a whole</p>	<p style="text-align: right;">Page 229</p> <p>1 DR. RAVI DHAR 2 not. So obviously, when the custom core 3 or processor core or when Intel wins or 4 what Apple is doing. So I have some 5 sense of it, but it is not the main 6 focus. 7 Q Did you research who the 8 decision makers are for making purchases 9 from ARM? 10 A I don't recall. I mean I 11 might have seen it in the Nuvia 12 depositions. But it wasn't central to my 13 opinion. 14 Q Do you know how long it 15 takes for ARM to enter into a sale with a 16 customer typically? 17 MR. FUNG: Objection, form. 18 A Same cycle. I don't 19 remember seeing that. 20 Q Do you know how long after 21 Qualcomm sells a chip to an equipment 22 manufacturer that the equipment 23 manufacturer may have a product on the 24 market that incorporates that chip? 25 A The introduction cycle, I</p>

<p style="text-align: right;">Page 230</p> <p>1 DR. RAVI DHAR 2 don't specifically look. But I've seen 3 the computer industry can take multiple 4 months, maybe even more, yeah. 5 Q When you say multiple 6 months, do you mean like more than six 7 months? 8 A It varies. I mean I 9 remember when I was more involved in 10 this, when Intel would launch a new chip, 11 it would depend on the customer. Dell 12 would launch it within a month. HP would 13 take six to nine months. So there was 14 not a fixed cycle in that business. 15 Q And you didn't study the 16 cycle in this business of how long it 17 typically takes Qualcomm's customers to 18 go from buying a chip to introducing a 19 product that includes that Qualcomm chip; 20 right? 21 A It wasn't relevant to my 22 task. 23 Q Let's go to page 27 of your 24 report which is a little bit back. 25 Here, you talk about the</p>	<p style="text-align: right;">Page 232</p> <p>1 DR. RAVI DHAR 2 Q Is marketing material an 3 indirect experience with a brand? 4 A Yeah. I would call it 5 indirect in that sense because it's 6 collateral. Direct, I mean by, you know, 7 sort of you have used it or are aware of 8 it kind of thing, not aware of it, used 9 it, some experience with it. 10 Q Did you do anything in this 11 case to research what direct experiences 12 ARM's customers have had with ARM? 13 A Not at an individual level. 14 As I said, it's a very successful brand. 15 And I didn't need to do that. And this 16 shocked that. Dr. Steckel seems to not 17 understand something basic as that. 18 Q So your conclusions about 19 what customers in the marketplace have 20 learned, felt, seen and heard are based 21 on indirect experiences in the market? 22 MR. FUNG: Objection, form. 23 A Not indirect. Aggregate, 24 its customers, that I look at the 25 aggregate, like sales and share and</p>
<p style="text-align: right;">Page 231</p> <p>1 DR. RAVI DHAR 2 components of a strong and distinctive 3 brand identity which we've talked about 4 extensively today; right? 5 A Yes. 6 Q At the beginning of this 7 section in paragraph 85, you state, "The 8 commercial strength of a brand lies in 9 what customers in the marketplace have 10 learned, felt, seen and heard about the 11 brand because of their direct or indirect 12 experiences over time." 13 A Right. 14 Q What do you mean by direct 15 experiences? 16 A So this is just the idea 17 that how much you've been exposed to the 18 brand, your purchase of your 50 percent 19 share of the addressable market. A lot 20 of people have experience with the brand 21 in the marketplace. If nobody's bought 22 it, then most of it is indirect. And so 23 there's a combination that indirect can 24 also be communications, events, all other 25 stuff people do.</p>	<p style="text-align: right;">Page 233</p> <p>1 DR. RAVI DHAR 2 recognition. But I did not -- and we 3 talked about this in the morning. I 4 didn't do a survey of consumers to do 5 that. 6 Q So there's no direct 7 evidence of what consumers' experiences 8 have been? 9 A There is not direct evidence 10 on the survey that I did. Proof of the 11 pudding is in the eating. If Apple sells 12 \$100 billion, that's direct evidence of a 13 strong brand. I don't need to do a 14 survey to do that. 15 Q So your position is that you 16 can establish the direct experiences that 17 customers have had in the marketplace 18 with ARM by looking at ARM's sales? 19 A You're using too many words. 20 MR. FUNG: Objection, form. 21 A Let me simplify. I have 22 established that it's a commercially 23 strong brand, looking at a number of 24 different factors, including sales, 25 shares, awards, events, those kinds of</p>

<p style="text-align: right;">Page 234</p> <p>1 DR. RAVI DHAR 2 things. 3 Q Let's go to paragraph 87. 4 A Okay. 5 Q You state in the bullet 6 that's at the top of page 28, but is part 7 of the same paragraph, at the end of that 8 paragraph, you say, "Length of use, 9 advertising/promotional efforts, exposure 10 to the brand, including its mentions as 11 an ingredient of the product by the 12 licensee and media, are important factors 13 in establishing brand awareness and a 14 brand image and, thus, brand knowledge." 15 Do you see that? 16 A Yes. And I would add all 17 the things we talked about: Sales, share 18 and all those things, yeah. 19 Q This sentence is not 20 supported by a footnote; right? 21 A It doesn't have a footnote. 22 Q What is the basis of this 23 opinion? 24 A What's the basis of this? 25 Q Yes.</p>	<p style="text-align: right;">Page 236</p> <p>1 DR. RAVI DHAR 2 A Oh, yes. Of course, it's 3 written down in ways of commercial 4 strength of the brand, would be based on, 5 you know, sales, share, advertising, all 6 these -- length of views. These are all 7 elements of establishing -- they're all 8 factors, in other words. They're around 9 for 100 years, and they have sales of 10 \$5 billion, and they advertise a certain 11 amount, they attend a lot of events and 12 went to a lot of -- received a lot of 13 awards. That all goes into the brand 14 awareness, brand strength. 15 Q But you didn't cite any 16 place that it's written down here; right? 17 A Not here. I've said in many 18 things, in many places, I have that 81, 19 which is sort of a book around that. 20 That would be a place also that would 21 talk about the brand strength in detail. 22 Q That's a 591-page textbook. 23 And you did not give any citation. 24 Do you know what you were 25 referring to in Footnote 81 or were you</p>
<p style="text-align: right;">Page 235</p> <p>1 DR. RAVI DHAR 2 A This is 101. This is the 3 commercial strength of a brand depends on 4 how much it's used, the length of it. 5 Then exposure happens to the ingredient. 6 So if you say ARM-based on all your 7 communication, your customers, which is 8 what Qualcomm has said, it's ARM-based, 9 ARM-based everywhere around core, this is 10 all multiplying the exposure. 11 And that goes to the 12 recognition and the strength of the brand 13 because brand strength has two 14 components: The recognition, which is 15 the awareness, and the associations, 16 which is the meaning we spoke about 17 earlier. 18 Q Is that written down 19 anywhere? 20 A It's written in many places. 21 It's written here, it's in my second 22 report, you know, all the different 23 things. 24 Q I meant, is it written down 25 in an authority that you could cite?</p>	<p style="text-align: right;">Page 237</p> <p>1 DR. RAVI DHAR 2 referring to that entire 591-page book? 3 A No. There would be a 4 chapter on brand strength, broken down 5 into brand strength. The whole book is 6 how to build brand equity. So there will 7 be a chapter on brand strength. And 8 they'll be a chapter on building strong 9 brands. I think over the years, he might 10 have even added a chapter on B2B branding 11 or something. 12 Q So if I wanted to 13 cross-examine you on your reference to 14 this book, I'd have to read the whole 15 book and figure out where all the 16 references are that you haven't cited; 17 right? 18 MR. FUNG: Objection. 19 A I'm happy to send it if you 20 need it. This is not -- this is 21 well-established principles. These are 22 not controversial principles, in other 23 words. 24 Q You say at the end of this 25 sentence that these are factors in</p>

<p style="text-align: right;">Page 250</p> <p>1 DR. RAVI DHAR 2 example. I would identify like different 3 awards, for example, when I did for 4 Apple. I would say different awards they 5 might have won, different brand 6 recognitions. So depending on the 7 different instances, I might look at 8 different organizations.</p> <p>9 Q How did you identify the 10 recognition documents that you cited in 11 Footnote 105?</p> <p>12 A So this is when, you know -- 13 so this is one of the ways in which, as I 14 said, it's a standard process of 15 establishing commercial strength, sales 16 share and recognition and awards.</p> <p>17 So I would ask counsel. I 18 would look -- I think the Web site also 19 talks about some awards and stuff they 20 have. So these are not meant to be 21 comprehensive. And I would ask counsel 22 like what are the others that are there. 23 And then I would look at them and decide.</p> <p>24 Q Do you think counsel 25 provided you with references to the World</p>	<p style="text-align: right;">Page 252</p> <p>1 DR. RAVI DHAR 2 in the last line. 3 A Yes. 4 Q This is not an award; right? 5 This is an arbitration decision? 6 A That's right. Looks like 7 it, yeah. 8 Q All of the documents, in 9 fact, that are cited in Section 105 were 10 arbitration decisions that were issued by 11 the World Intellectual Property 12 Organization arbitration and mediation 13 center; right?</p> <p>14 A I think my memory is that 15 they referred to ARM. They sort of 16 provide a decision on ARM being a strong 17 or a famous mark or something to that 18 effect is some conclusions in many of the 19 documents that I recall reading; in other 20 words, they provide an opinion on the ARM 21 mark here.</p> <p>22 Q They rule on trademark 23 claims related to the ARM mark; right?</p> <p>24 A Right. But they provide 25 this notion that ARM is a strong mark or</p>
<p style="text-align: right;">Page 251</p> <p>1 DR. RAVI DHAR 2 Intellectual Property Organization? 3 A Again, I don't remember 4 because I had done some research. But 5 clearly, after I mentioned this list, 6 there was a list of things that I would 7 look at and decide whether it's relevant 8 or not.</p> <p>9 MS. MORGAN: I'm going to 10 mark this as QX219.</p> <p>11 (The above-referred-to 12 document was marked as QX Exhibit 219 13 for identification, as of this date.)</p> <p>14 Q Do you recognize this 15 document?</p> <p>16 A They all look the same. 17 They were a whole bunch of these here.</p> <p>18 Q This has a Bates number at 19 the bottom; right?</p> <p>20 A Yes.</p> <p>21 Q And it says 1315310. You 22 see that?</p> <p>23 A Yes.</p> <p>24 Q Do you see that that Bates 25 number is listed in Footnote 105? It's</p>	<p style="text-align: right;">Page 253</p> <p>1 DR. RAVI DHAR 2 a famous mark or something well-known. 3 That's my memory from many of these that 4 I saw. 5 Q Where do you see that in 6 here? 7 A I have to look carefully. 8 So in the last page, it talks a little 9 bit about the panel assessing trademark 10 as distinctive and widely known in the 11 relevant customer circles, particularly 12 in the United States. That's an example 13 of, you know, the kind of stuff I found 14 in these documents.</p> <p>15 Q And this is a decision 16 that's ruling that the ARM trademark is 17 sufficiently distinctive for certain 18 products to be enforced; right?</p> <p>19 A Right.</p> <p>20 Q You told me earlier that a 21 trademark and a brand are different; 22 right?</p> <p>23 MR. FUNG: Objection, form.</p> <p>24 A I said the trademark is 25 like, you know, a specific thing that has</p>

<p style="text-align: right;">Page 254</p> <p>1 DR. RAVI DHAR 2 been recognized. And the brand would be 3 the name like that. So specific 4 registration of Apple and the Apple 5 brand, obviously one is connected to the 6 other but what people see in the world as 7 a brand. And the trademark registration 8 would have a little bit more details 9 around that, yeah. So the word mark, ARM 10 and the brand are kind of closer, if you 11 like.</p> <p>12 Q Is it your understanding 13 that any trademark that is found to be 14 distinctive enough to be enforced 15 demonstrates global good will, 16 reputation, fame and distinctiveness?</p> <p>17 MR. FUNG: Objection, form.</p> <p>18 A Again, I'm not relying on 19 any one piece of information. I've said 20 in my report your side hasn't pointed on 21 anything that ARM is not distinctive. I 22 said this to Dr. Steckel. And I haven't 23 found it. And I'm saying this is one of 24 the many documents that I see that 25 consistently also said it's distinctive.</p>	<p style="text-align: right;">Page 256</p> <p>1 DR. RAVI DHAR 2 period, yeah. 3 Q So you're saying that when 4 this says ARM's CPUs were used in more 5 than 250 billion chips since last year, 6 that's not correct?</p> <p>7 A That's not correct. That's 8 cumulative. I think I said somewhere in 9 this report, it's 30 billion last year.</p> <p>10 Q Is it possible to have a 11 commercially successful brand that's not 12 a strong brand?</p> <p>13 A Sorry. Could you repeat 14 that?</p> <p>15 Q Is it possible for a brand 16 to be commercially successful, but not 17 strong?</p> <p>18 MR. FUNG: Objection, form.</p> <p>19 A I mean it would be strong in 20 that segment. I'm trying to think if 21 it's a strong brand. It goes into the -- 22 we discussed -- legal issues around 23 copyright protected, those kind of 24 things, the word is descriptive, generic. 25 So there might be some legal issues.</p>
<p style="text-align: right;">Page 255</p> <p>1 DR. RAVI DHAR 2 So I'm not relying -- 3 there's no silver bullet here that 4 there's only one piece here. Dozens of 5 these things in these decisions, then 6 subsequently on the awards and other 7 things and the lack of any close similar 8 mark in the marketplace would also go to 9 distinctive.</p> <p>10 Q The next subsection 11 says, "More than 260 companies have 12 reported shipping ARM-based chips this 13 year, and ARM CPUs were used in more than 14 250 billion chips last year."</p> <p>15 Is this an example of the 16 commercial evidence that you're providing 17 to support that ARM is a strong brand?</p> <p>18 A Correct. I think the 19 250 billion should be cumulative. I 20 think the last year was 30 billion I 21 noted somewhere. 250 is cumulative is 22 what I recall.</p> <p>23 Q Cumulative over what period 24 of time?</p> <p>25 A I forget. Some larger</p>	<p style="text-align: right;">Page 257</p> <p>1 DR. RAVI DHAR 2 Q And then in Subsection C -- 3 A So where are you now? 4 Q C. Same section, but now 5 Subsection C. 6 You give your next group of 7 evidence that ARM has a distinctive or 8 strong mark, and you list out various 9 awards and accolades here. You see that?</p> <p>10 A Yes. And they're not 11 complete. There's just a bunch here, 12 yeah.</p> <p>13 Q How did you identify these 14 awards for your report?</p> <p>15 A So some, I looked online 16 myself. Some, I said they're on the Web 17 site. And I also asked counsel this is 18 what I'm looking for, like you can find 19 additional. And I decide whether to 20 include them or not. The idea was to be 21 illustrative rather than comprehensive.</p> <p>22 Q The first one you list is 23 the International Trade Awards?</p> <p>24 A Yes.</p> <p>25 Q What is that award body?</p>

<p style="text-align: right;">Page 258</p> <p>1 DR. RAVI DHAR 2 A I don't recall sitting here. 3 There were different awards. I looked at 4 so many. 5 Q How did you select which 6 ones you would include? 7 A It was just like, you know, 8 look at the organization. Sometimes I 9 looked at who else was listed in that, 10 like they all looked like companies 11 well-known, like Samsung would be getting 12 something. So I looked at, you know, 13 many different places for this, what came 14 up. And I looked for awards for ARM. So 15 many different sources. 16 Q Do you know what the 17 criteria are for being the overall winner 18 of the International Trade Awards? 19 A Not sitting right now. 20 Q Do you know if decision 21 makers in ARM's B2B market are aware of 22 this award? 23 A Again, across all of this is 24 an indication of commercial strength and 25 success in the marketplace. But I did</p>	<p style="text-align: right;">Page 260</p> <p>1 DR. RAVI DHAR 2 A Yeah. If it's for its 3 performance globally, it's relevant, 4 yeah. It's a very global company of that 5 industry. So I think a lot of the award 6 is for success of British companies, 7 potentially in the world. 8 Q Do you know what the 9 criteria are for winning the Queens Award 10 for Enterprise? 11 A I might have seen it at some 12 point. Sitting here, I don't memorize 13 all the criteria for all the awards that 14 I looked at. 15 Q Do you know if that award 16 has to do with the brand? 17 A Again, I don't recall. The 18 award was given for overall recognition. 19 It can be given for technology. But 20 ultimately, that all goes to the brand. 21 We talked about Google's secret sauce 22 might be the search engine. But the 23 benefit goes to the brand. Apple might 24 have some technology that's user 25 friendly. But the benefit goes to the</p>
<p style="text-align: right;">Page 259</p> <p>1 DR. RAVI DHAR 2 not look at every single award as 3 something that a customer would be aware 4 of, yeah. 5 Q Did you look at if a 6 customer would be aware of this award? 7 A Sorry. Which award? 8 Q The International Trade 9 Awards. 10 A Not specifically, no. 11 Q The next award that you 12 listed is the Queens Award for Enterprise 13 in 2011. 14 A Right. 15 Q What's that award? 16 A Again, I don't remember the 17 details. But I think it must be the UK. 18 It's a UK-based company. It's awards 19 given by the UK. 20 Q You stated earlier in your 21 report that you were analyzing ARM's 22 marks in the U.S. market. 23 A Right. 24 Q Is an award in the UK 25 relevant to that analysis?</p>	<p style="text-align: right;">Page 261</p> <p>1 DR. RAVI DHAR 2 brand. So they're linked. 3 Q Do you know if decision 4 makers in ARM's B2B market are aware of 5 the Queens Award for Enterprise? 6 A Again, these, I don't know 7 about a specific award. This is 8 collectively showing that ARM is a very 9 successful company. I'm surprised that 10 it's even under dispute, frankly, or even 11 a point worthy of dispute. And these are 12 just examples, illustrative of that it's 13 a very strong brand. 14 Q So you don't know if 15 decision makers in ARM's B2B market are 16 aware specifically of the Queens Award 17 for Enterprise? 18 MR. FUNG: Objection, form. 19 A Of a specific customer. But 20 the aggregate, when you get all these 21 recognitions, many people would be aware 22 of it. 23 Q They would be aware of this 24 specific award? 25 A Of these awards. I don't</p>

<p>1 DR. RAVI DHAR 2 know about the specific award. But the 3 fact that you're so successful, and this 4 is only a subset as I mentioned of the 5 awards. 6 Q What is the Linley Group's 7 Best Processor IP Award? 8 A Again, sitting here, I don't 9 recall. But it's another award given by 10 organization. 11 Q You don't know what it's 12 rewarding? 13 MR. FUNG: Objection, form. 14 A Well, it says processor IP. 15 But I don't remember the exact details at 16 ARM. It talks about some of the details 17 in the footnote. But I don't remember 18 all the details of the processor criteria 19 that they have. 20 Q And putting aside that you 21 believe that the awards in the aggregate 22 have permeated the market and that 23 customers understand that ARM has won 24 many awards, do you know if decision 25 makers in ARM's B2B are specifically</p>	<p>Page 262</p> <p>1 DR. RAVI DHAR 2 A I might have known. Sitting 3 here, I don't know. 4 Q Again, you don't know if 5 decision makers in ARM's B2B market are 6 specifically aware of this award, the 7 TSMC OIP Partner of the Year Award; 8 right? 9 A I would expect many to know. 10 But I have not done a specific analysis. 11 Q Do you know if ARM's 12 customers make purchasing decisions based 13 on these awards? 14 A This award really goes back 15 to the commercial strength and 16 recognition. And obviously, you don't 17 make decisions based on the award. But 18 it's reflective. It's not a causal. But 19 it drives -- so, for example, if a law 20 school is rated in the top ten, it means 21 people think the law school is doing 22 something right. So there are underlying 23 dimensions that gets you recognized for 24 being the best processor which the 25 companies will take into account here.</p>
<p>1 DR. RAVI DHAR 2 aware of this award that you cited, the 3 Linley Group's Best Processor IP Award? 4 MR. FUNG: Objection. 5 A No. I haven't looked at 6 this specific award. It was not 7 relevant, frankly, for the thing. As I 8 said, this is one of many factors that 9 I've established that lead to ARM's 10 strength. 11 Q The last award that you list 12 here is the TSMC OIP Partner of the Year 13 for Processor IP Award. Do you see that? 14 A Yes. 15 Q What is that award? 16 A Again, in the footnote, it 17 says it's a partner award. I think it 18 might be for Taiwan. I think it's Taiwan 19 Semiconductors. But I don't remember 20 sitting here. And it gives sort of 21 awards for best partners for the 22 organization which is a very large 23 semiconductor organization. 24 Q You don't know what the 25 criteria are for that award; right?</p>	<p>Page 263</p> <p>1 DR. RAVI DHAR 2 Q You have not done a specific 3 analysis of whether ARM's customers make 4 purchasing decisions based on these 5 awards; right? 6 A That was very far from my 7 objective in this thing, yeah. 8 Q It is your professional 9 opinion, though, that renown, as 10 indicated by reputation, fame, awards and 11 accolades is a good measure of a 12 trademark strength; right? 13 A It's one measure. But I 14 have multiple measures. It is a good 15 input, yeah, of course. If you want 16 popular choice award, it's a good measure 17 of popular choice. 18 Q What principles of marketing 19 are you applying when you come to that 20 conclusion? 21 A So the award -- this goes 22 back to the awards are based on 23 performance of the product or in the 24 marketplace. So this goes to the 25 commercial strength, what goes into</p>

<p style="text-align: right;">Page 266</p> <p>1 DR. RAVI DHAR 2 commercial strength. We talked about 3 sales, share, length of use, events, 4 communication events and awards is one 5 such factor.</p> <p>6 Q In the next few paragraphs, 7 you talk about ARM's efforts to develop 8 its brand?</p> <p>9 A Yes.</p> <p>10 Q Do you see that?</p> <p>11 A Yes.</p> <p>12 THE WITNESS: Are you taking 13 a break at some point?</p> <p>14 MS. MORGAN: Yes. I'm 15 almost done with this, and then we 16 could take a break.</p> <p>17 THE WITNESS: No. That's 18 fine.</p> <p>19 Q You assert in paragraph 101 20 that strong branding is most effective 21 when the underlying product or service is 22 of high quality, particularly in B2B 23 markets, where buyers often have a high 24 degree of technical expertise in 25 evaluating the products and services that</p>	<p style="text-align: right;">Page 268</p> <p>1 DR. RAVI DHAR 2 events. 3 So the more people know what 4 you're doing, very similar to the 5 Snapdragon and Summit. You're trying to 6 prelaunch, like what are the new stuff. 7 So having your presence felt is just 8 another factor in overall exposure, if 9 you like.</p> <p>10 Q You don't have the technical 11 expertise to evaluate if ARM's underlying 12 product is high quality; right?</p> <p>13 MR. FUNG: Objection, form.</p> <p>14 A That's correct. I don't 15 know whether it's technically superior, 16 just like I don't know if Google's search 17 engine is technically superior, Bing or 18 something else.</p> <p>19 Q In paragraph 103, you 20 discuss the benefits of ARM's technology 21 for downstream customers. You see that?</p> <p>22 A Yes.</p> <p>23 Q Who are ARM's downstream 24 customers?</p> <p>25 A So this would be the</p>
<p style="text-align: right;">Page 267</p> <p>1 DR. RAVI DHAR 2 they purchase.</p> <p>3 A Right.</p> <p>4 Q Do you see that?</p> <p>5 A Yes.</p> <p>6 Q Do you agree that the 7 quality of ARM's products is relevant to 8 its customers' analysis of their purchase 9 decisions?</p> <p>10 A Yes. That would be an input 11 into, you know, a decision which is 12 performance, yes.</p> <p>13 Q Why are ARM's efforts to 14 develop its brands relevant to the 15 question of whether its brand is strong?</p> <p>16 A It's just another element 17 into, you know, how would people 18 become -- you know, sales and share, we 19 discussed are one thing, but also how 20 often are you discussing your brand. And 21 with the key -- because when you have 22 these events, these events are not random 23 people attending. These are people who 24 are going to be potentially people from 25 the industry, broadly defined, for the</p>	<p style="text-align: right;">Page 269</p> <p>1 DR. RAVI DHAR 2 discussion we had earlier which would be 3 sort of, you know -- it's not the end 4 consumer I'm talking about. It will be 5 the Qualcomm customers as an example 6 here.</p> <p>7 Q What benefits does ARM offer 8 to downstream customers?</p> <p>9 A So my understanding is that, 10 you know, if you are a downstream 11 customer and what ARM brand stands for 12 and the benefits of the ecosystem. So 13 while clearly it benefits Qualcomm or the 14 licensee, but it also potentially has 15 benefits for the device makers and so on.</p> <p>16 Q How do benefits to 17 downstream customers impact B2B 18 transactions in the microprocessor 19 industry?</p> <p>20 A I mean, again, this is the 21 discussion we had around if you think 22 it's branded with ARM. So you know ARM, 23 which is a strength of the mark, one 24 factor. But you also think it gives me 25 some potential benefit, which if you're</p>

<p style="text-align: right;">Page 270</p> <p>1 DR. RAVI DHAR 2 not ARM, you don't get. Maybe you don't 3 get access to the ecosystem. 4 So in that sense, to the 5 extent there is this benefit of 6 everything that ARM does to the customers 7 of Qualcomm, that benefit would be, you 8 know, inferred and lost if it's not 9 licensed.</p> <p>10 Q Do you know if ARM's 11 customers care about benefits to 12 downstream customers?</p> <p>13 MR. FUNG: Objection, form.</p> <p>14 A Sorry. Who?</p> <p>15 Q Do you know if ARM's 16 customers care about benefits to 17 downstream customers?</p> <p>18 A You mean benefits ARM's 19 customer -- well, ARM's customers clearly 20 care about benefits to downstream 21 customers; in other words, if I 22 understand your question correctly, 23 Qualcomm cares about, you know, what 24 their customer wants which would be my 25 definition of the downstream customers.</p>	<p style="text-align: right;">Page 272</p> <p>1 DR. RAVI DHAR 2 A Yes. 3 Q And we've discussed that you 4 did not conduct a survey to establish 5 that ARM has a strong brand; right? 6 A Correct. 7 Q Could you have conducted a 8 survey in this case? 9 A That would be, you know, 10 whether the ARM is a strong market. And 11 I don't think it's required. And I 12 didn't feel the need to it and could one 13 do a survey, as I said. Surveys are 14 typically done to get more of a magnitude 15 when the market is famous, fame surveys. 16 I was not opining that it's famous. It 17 might be. But I was not opining that. 18 So typically, surveys would be done for 19 that.</p> <p>20 Q Would it have been possible 21 for you to do a survey if you wanted to 22 establish that the market is famous?</p> <p>23 A Again, you would have to 24 know, you know, decide on all of ARM's 25 customers -- sorry. The fame is outside</p>
<p style="text-align: right;">Page 271</p> <p>1 DR. RAVI DHAR 2 So, yes, they would care about what's 3 important to, you know, the laptop HPs or 4 Lenovos of the world. 5 Q Is that true even if 6 downstream customers don't know that 7 they're purchasing an ARM product? 8 A It's true about the 9 technology, but not true of the brand. 10 So there's a distinction; right? So they 11 still have the performance criteria that 12 they would want.</p> <p>13 MS. MORGAN: Let's take a 14 break.</p> <p>15 THE VIDEOGRAPHER: Off the 16 record, 2:46 p.m. 17 (A short recess was taken.) 18 THE VIDEOGRAPHER: Back on 19 the record, 3:01 p.m. 20 Q Welcome back, Dr. Dhar. 21 A Thank you. 22 Q We talked about the 23 different types of evidence that you 24 examined in determining that ARM has a 25 strong brand; right?</p>	<p style="text-align: right;">Page 273</p> <p>1 DR. RAVI DHAR 2 the customers. It's more broadly in the 3 marketplace. It was not necessary for my 4 purposes.</p> <p>5 Q But is it possible that you 6 could have done it, even if you view it 7 as unnecessary?</p> <p>8 A You mean if a fame survey 9 could be done in theory? Yes, it could 10 be done in theory.</p> <p>11 Q How long would it take to do 12 a survey like that?</p> <p>13 A Again, I have a job. I'm 14 doing research. I would say four to six 15 weeks or something, yeah.</p> <p>16 Q Did you ask ARM's marketing 17 department whether it had surveys from 18 any other prior brand research?</p> <p>19 A I did ask through counsel 20 that, you know, we talked about tracking 21 surveys, yes. I asked if they had any 22 such things. And my understanding is 23 they did not, yeah.</p> <p>24 Q Did you ask for that 25 information because it would have been</p>

<p style="text-align: right;">Page 274</p> <p>1 DR. RAVI DHAR 2 helpful to you in reaching your 3 conclusion that ARM is a strong brand? 4 A Again, it would be just 5 another data point. So these were all 6 data points. So it would be another data 7 point. 8 Q Did you ask ARM's marketing 9 department for any other brand research 10 that it had? 11 MR. FUNG: Objection, form. 12 A I mean I remember -- by the 13 way, you asked if I spoke to ARM, anyone. 14 And I said no. But I think I recall I 15 spoke to Mr. Armstrong very early on. I 16 don't recall much of that conversation. 17 That's why I forgot. But I did have a 18 conversation with -- I don't know if 19 somebody else was there in addition to 20 Mr. Armstrong and some counsel. 21 But to your question, I mean 22 I generally asked broadly around that. 23 And my sense was, you know, I think he's 24 a new person. I forget how long he's 25 there now. The CMOs might have changed.</p>	<p style="text-align: right;">Page 276</p> <p>1 DR. RAVI DHAR 2 A Okay. I'm not supposed 3 to -- 4 MS. MORGAN: I'm sorry. Are 5 you cloaking the conversation with 6 Mr. Armstrong in privilege? 7 MR. FUNG: No. I'm 8 reminding the witness not to disclose 9 communication with counsel to the 10 extent it came up during those 11 communications. 12 Q Your counsel can tell me if 13 he thinks I'm wrong. But you can testify 14 about your conversation with 15 Mr. Armstrong. You just can't testify 16 about conversations you had with counsel. 17 A Right. Counsel was present 18 at that time, is what I mentioned. But 19 the bottom line is I don't remember. I 20 don't remember I had this conversation. 21 This was very early in the matter. I 22 think I happened to be in London. And 23 this was a Zoom at that time. I was 24 traveling for some work, like maybe in 25 half an hour. But most of it I think is</p>
<p style="text-align: right;">Page 275</p> <p>1 DR. RAVI DHAR 2 And my sense is there wasn't anything 3 that I asked around the research that 4 they had on their brand, is my memory of 5 it. 6 Q Did you ask specifically for 7 any type of customer-based evidence? 8 MR. FUNG: Objection, form. 9 A Yeah. Not in those words. 10 I asked about what kind of like research 11 you might have done on -- empirical 12 research you might have done on your 13 customers. 14 And my sense was that it 15 certainly is not in discovery because I 16 asked counsel that too. I haven't seen 17 that. But I think -- my recollection is 18 that there wasn't anything that they said 19 they had. 20 Q What else did you discuss 21 with Mr. Armstrong? 22 MR. FUNG: I'd caution the 23 witness not to reveal privileged 24 communications with counsel. But go 25 ahead.</p>	<p style="text-align: right;">Page 277</p> <p>1 DR. RAVI DHAR 2 what we covered. I [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] But that's my memory. 10 Q Was there anything else that 11 was part of that discussion that you 12 considered in drafting your report? 13 A I would have mentioned the 14 thing. My sense is this was very early 15 in the matter, like around October or 16 something when I was in London, I think. 17 And I might have just asked a very 18 foundation type questions at best at that 19 time because I was just getting into 20 details. 21 Q Did that conversation form 22 part of the basis of your knowledge 23 that's in the report? 24 A No, no memory of it. So I 25 don't think it did.</p>

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<p style="text-align: right;">Page 278</p> <p>1 DR. RAVI DHAR 2 Q Did you have any other 3 conversations with anyone from ARM that 4 you did not disclose? 5 A No. That was the only one. 6 I don't know if anybody else from ARM was 7 in that call. But I think it was 8 Mr. Armstrong. There might have been 9 some other ARM executive. But I don't 10 have memory of that. 11 Q And beyond the factors that 12 we've discussed, which is considering the 13 length of time ARM used the mark, the 14 awards ARM won, ARM's arbitration awards, 15 the sale of ARM-based chips and ARM's 16 efforts in branding its company and its 17 products, did you take any other steps to 18 assess customer impressions of ARM's 19 brand? 20 A I think that captures most 21 of the commercial variables, share, what 22 shares related to sales. So you could 23 think of it similarly. So those were the 24 main ones I think, yeah. 25 Q Did you review any of ARM's</p>	<p style="text-align: right;">Page 280</p> <p>1 DR. RAVI DHAR 2 the citations that I have of -- so you 3 said ARM's customers; right? 4 Q ARM's customers. 5 A Yeah. So I think I remember 6 there was some earnings call with the CFO 7 of Qualcomm that I had seen. Palkhiwala 8 I think was his name. I don't know if 9 there's an H or not. Probably is. But 10 I'm not 100 percent. 11 Q Did you ask ARM for any 12 communications it had with its customers 13 that would show ARM's customers' 14 impressions of ARM? 15 A Not specifically. I did 16 not. 17 Q And you weren't provided 18 with any such documents? 19 A Yes. I don't think so. 20 Q Let's go to paragraph 107, 21 which is in a new section, Section C, 22 trademark infringement. 23 A Yes. 24 Q Are you opining in this case 25 that Qualcomm has infringed ARM's</p>
<p style="text-align: right;">Page 279</p> <p>1 DR. RAVI DHAR 2 customer social media feeds to assess 3 whether they mention ARM? 4 A ARMs, customer social media 5 feed? 6 Q Yes. 7 A I did not. 8 Q Did you examine whether any 9 of ARM's customers published or engaged 10 with blog posts discussing ARM? 11 A You know, I might have come 12 across some when I was doing my own 13 search, but nothing that informed my 14 opinion. 15 Q Did you collect and review 16 SEC filings of ARM's customers to see 17 whether the filings mentioned ARM? 18 A I did not. I just looked at 19 the ARM IPO and SEC filings. 20 Q Did you review transcripts 21 of earnings calls or analyst calls of 22 ARM's customers to see whether its 23 customers mentioned ARM and in what 24 light? 25 A So I'm trying to remember</p>	<p style="text-align: right;">Page 281</p> <p>1 DR. RAVI DHAR 2 trademarks? 3 A So you mentioned infringed 4 was sort of legal, likely to confuse, 5 yes. 6 Q Likelihood of confusion is 7 part of the legal standard for 8 infringement; right? 9 A It probably is, yes. 10 Q How did you come to the 11 conclusion that Qualcomm's use of ARM's 12 marks is likely to create confusion? 13 A So this was based on the 14 analysis of like, you know, how the 15 connection was being made between the 16 Nuvia products and ARM because in my 17 assumption, there was not a license. 18 So the use of, you know, ARM 19 or ARM-based or ARM compliant is likely 20 to communicate to the customers that 21 there's a relationship based on ARM 22 brand. And that's what's going to be the 23 likelihood of confusion. 24 Q If you look at the header, 25 just under the heading C, it says</p>

<p>1 DR. RAVI DHAR</p> <p>2 "Qualcomm's Historical Use of ARM's</p> <p>3 Trademarks."</p> <p>4 Do you see that?</p> <p>5 A Yes.</p> <p>6 Q And then two pages later, it</p> <p>7 says, "Qualcomm's Current and Future Use</p> <p>8 of ARM's Trademarks with Nuvia Products."</p> <p>9 Do you see that?</p> <p>10 A Yes.</p> <p>11 Q What is the distinction that</p> <p>12 you drew between historical use and</p> <p>13 current and future use?</p> <p>14 A Good question. So I think</p> <p>15 the historical use was, as we discussed</p> <p>16 earlier, ARM --</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>24 And then I'm saying that,</p> <p>25 you know, the current use is basically</p>	<p>Page 282</p> <p>1 DR. RAVI DHAR</p> <p>2 of whether there's a difference in the</p> <p>3 references that</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>6 A I think I mentioned I don't</p> <p>7 see the distinction between -- so they</p> <p>8 use the word [REDACTED] So I think both</p> <p>[REDACTED]</p> <p>I</p> <p>12 think you asked me if it is unique to</p> <p>13 [REDACTED]</p> <p>[REDACTED] But I didn't look at</p> <p>16 that. But in terms of [REDACTED]</p> <p>[REDACTED]</p> <p>19 Q So if you look at paragraph</p> <p>20 110 --</p> <p>21 A Okay.</p> <p>22 Q -- there's a reference to</p> <p>23 the [REDACTED] technology. Do you see</p> <p>24 that?</p> <p>25 A Yes.</p>
<p>1 DR. RAVI DHAR</p> <p>2 related to the Nuvia products, if you</p> <p>3 like. And I said that future use is</p> <p>4 where we discussed earlier, which is</p> <p>5 future -- I don't know how they will use</p> <p>6 it. But if it continues to use like that</p> <p>7 and whatever it does in the future will</p> <p>8 lead to confusion. But that's the</p> <p>9 distinction between historical and</p> <p>10 current.</p> <p>11 And the future, I mentioned</p> <p>12 in the response that when -- if you would</p> <p>13 not use the mark, Qualcomm basically did</p> <p>14 not say yes or no kind of a thing is my</p> <p>15 memory. So they denied answering the</p> <p>16 question or something like that.</p> <p>17 Q So the historical use</p> <p>18 section --</p> <p>19 A Yes.</p> <p>20 Q --</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>23 TLA?</p> <p>24 A Yes.</p> <p>25 Q Do you have an understanding</p>	<p>Page 283</p> <p>1 DR. RAVI DHAR</p> <p>2 Q You think that that's the</p> <p>3 same as the way that Qualcomm uses the</p> <p>4 word [REDACTED]</p> <p>[REDACTED]</p> <p>6 A No. So this would be a</p> <p>7 version where it literally says ARM,</p> <p>8 which is my third thing. If you say ARM</p> <p>9 processor, then that would be also</p> <p>10 obviously misleading if it's not ARM.</p> <p>11 In this case, it is. And I</p> <p>12 was making the distinction that there's</p> <p>13 [REDACTED]</p> <p>[REDACTED] But when</p> <p>15 they use the word ARM, they might be</p> <p>16 using it -- again, depends who's</p> <p>17 speaking. [REDACTED]</p> <p>[REDACTED] which I don't think</p> <p>19 they should, like when they're speaking</p> <p>20 to the analyst or some other places. And</p> <p>21 so here, I think the ARM itself, I don't</p> <p>22 remember if they [REDACTED]</p> <p>[REDACTED]</p> <p>25 Q And you don't think that</p>

<p style="text-align: right;">Page 322</p> <p>1 DR. RAVI DHAR 2 a market where you're trying to buy a 3 washing machine versus chewing gum. 4 People would pay more attention and 5 exercise more care. And as a result, 6 some alleged similarity may or may not 7 lead to confusion.</p> <p>8 Q How did you take into 9 account degree of care in analyzing 10 likelihood of confusion in this case?</p> <p>11 A So it's very simple as I 12 said. But I don't think sophistication 13 changes anything because it stays 14 [REDACTED]. So 15 that's what it means. So if it said 16 like, let's say ARM, ARM me, someone with 17 a degree of care would say, well, that's 18 not ARM, that's ARM me-based.</p> <p>19 So to me, when you use [REDACTED] [REDACTED] [REDACTED] The players have testified. 23 And so to me, this is a matter where -- 24 that because it uses the same brand name 25 with the modifier base or compliant, it's</p>	<p style="text-align: right;">Page 324</p> <p>1 DR. RAVI DHAR 2 A That's right, yeah. 3 Q Could you have done one, 4 regardless of whether you thought it was 5 called for?</p> <p>6 A It's not obvious. As I 7 said, the product was barely launched and 8 how many customers are there. You can't 9 do a survey with 20 people. You won't 10 get many for the results. You would need 11 to have hundreds of customers that you 12 can approach. You would need to know to 13 get the sample right. So I didn't look 14 into that at all. But I wouldn't say 15 that this is an obvious one for doing a 16 survey.</p> <p>17 Q Have you ever done a survey 18 for a product that's not yet launched?</p> <p>19 A I mean, you know, different 20 types of surveys, when you're doing 21 consulting, you're trying to often learn 22 about demand for a product. So you might 23 do surveys in that case, like who's going 24 to buy this. But that's a very different 25 purpose. So you would try to identify,</p>
<p style="text-align: right;">Page 323</p> <p>1 DR. RAVI DHAR 2 not exercising -- and Qualcomm has 3 previously used ARM-based for a license 4 from ARM, and Qualcomm licenses are from 5 ARM. So I think my point was that 6 sophistication is unlikely to change 7 that.</p> <p>8 Q Did you do any research to 9 evaluate whether B2B customers are aware 10 of this lawsuit?</p> <p>11 MR. FUNG: Objection, form.</p> <p>12 A I did not do -- I did not do 13 anything, any analysis on that.</p> <p>14 MS. MORGAN: Let's take a 15 break.</p> <p>16 THE VIDEOGRAPHER: Off the 17 record, 3:52 p.m.</p> <p>18 (A short recess was taken.)</p> <p>19 THE VIDEOGRAPHER: Back on 20 the record, 4:03 p.m.</p> <p>21 Q Dr. Dhar, we've talked about 22 this.</p> <p>23 But you did not conduct a 24 survey to establish likelihood of 25 confusion in this case; right?</p>	<p style="text-align: right;">Page 325</p> <p>1 DR. RAVI DHAR 2 you know, easier to do for a consumer 3 product.</p> <p>4 Q Have you ever conducted a 5 survey, a likelihood of confusion survey 6 for a product that's not yet launched?</p> <p>7 A I don't recall. I don't 8 recall if I did. Nothing comes to mind.</p> <p>9 Q Is it possible to do that?</p> <p>10 A I mean under some 11 limitations, like, in other words, as I 12 said entire -- if it's not in the market, 13 you don't know all the ways in which they 14 would communicate about the mark.</p> <p>15 So they'll be some 16 constraints, which is why I wrote about 17 how the future use -- I don't know all of 18 it -- how the market would be used by 19 Qualcomm in the future. And so you would 20 have some constraints. And you would 21 have to find out who the likely buyers 22 are. So it might be easier, much easier 23 in a consumer product than something like 24 this for sure.</p> <p>25 Q Do you know how many</p>

<p style="text-align: right;">Page 326</p> <p>1 DR. RAVI DHAR 2 customers Qualcomm marketed its products 3 to before they were launched? 4 MR. FUNG: Objection, form. 5 A Because these are large 6 companies, so I assume similar to ARM, 7 we're not talking huge numbers which 8 makes a survey much more difficult here. 9 Q Did you ask if ARM had done 10 any of its own likelihood of confusion 11 analysis related to what you referred to 12 as the Nuvia products? 13 A I did not see anything. I 14 don't know if I specifically asked that. 15 I wouldn't expect them to have done. But 16 I asked more broadly about work on brand, 17 but not on a particular survey. 18 Q You told me earlier that a 19 survey related to strength or awareness 20 of the ARM brand would have taken four to 21 six weeks. Do you remember that? 22 A If you were to do a survey, 23 again, the limitations on how many ARMs 24 customers are there. But these are just 25 customers. If they're several hundred of</p>	<p style="text-align: right;">Page 328</p> <p>1 DR. RAVI DHAR 2 Q Would you expect that a 3 likelihood of confusion survey in this 4 case would have also taken about four to 5 six weeks? 6 MR. FUNG: Objection, form. 7 A If you could do one. I 8 think the challenge is not running a 9 survey. The challenge is the survey, you 10 know, does a sample size. So many times, 11 I have not done a survey because we look 12 into the sample and find there's no way 13 we can get, you know, 200 people here. 14 So that takes a little while. 15 So I was just referring to 16 the logistics of four to six weeks. But 17 the question before that, even if it's 18 feasible. And to me, it's not obvious 19 it's feasible. 20 Q Could you also have just 21 contacted customers and anecdotally 22 collected evidence about confusion? 23 MR. FUNG: Objection, form. 24 A I mean I don't like to do 25 that. I think that's anecdotal as you</p>
<p style="text-align: right;">Page 327</p> <p>1 DR. RAVI DHAR 2 them, and you want to ask them some 3 questions around, you know, by 4 definition, they would be aware of ARMs. 5 So the question is if 6 there's a customer. So if you look at a 7 broader pool, people who are interested 8 in, you know, core processes of other 9 systems. So you would have to 10 identify -- again, it's a non-trivial 11 exercise here to do a survey, to identify 12 the number of sample size and how you 13 read who the right people are. 14 Keep in mind this is a 15 buying center. So you need to reach 16 different people who are decision makers. 17 So when I've done surveys on medical 18 products, like oncologists, very similar 19 restraints. The U.S. doesn't have that 20 many neuro-oncologists. So if you're 21 trying to do a survey of 22 neuro-oncologists, somewhat busy people, 23 it's not easy to get what you would need 24 in terms of survey even if you wanted to 25 do some.</p>	<p style="text-align: right;">Page 329</p> <p>1 DR. RAVI DHAR 2 said. And I think a survey needs to be 3 done in a very systematic unbiased way. 4 So I would not -- that's not my practice 5 to do that. 6 Q But you could have done it 7 here; right? 8 A Well, I would not do it 9 because I don't think it's good practice. 10 But somebody might do it, yeah. 11 Q In your view, it was better 12 not to have any information about if 13 customers were confused about what you 14 referred to as the Nuvia products that 15 are collected anecdotally? 16 MR. FUNG: Objection, form. 17 A That's right because I felt 18 I had enough information to make an 19 unbiased decision. If I start talking or 20 somebody I assign, I think it gets to 21 biased data. 22 Q And you've never done a 23 survey with fewer than hundreds of 24 participants that you found meaningful? 25 A Certainly lately, I would</p>

<p style="text-align: right;">Page 334</p> <p>1 DR. RAVI DHAR 2 I mean certainly, you can list. We have 3 no license with ARM. But it uses XYZ, if 4 that's allowed. I don't know if that's 5 allowed or not. But let's say you wanted 6 to make a statement. So companies would 7 often say this has no relationship with 8 Y. But this is -- you know, this is why 9 you asked me about compatibility. In 10 some contexts, compatibility, which 11 clearly makes sense, we have no 12 relations, we have no connections to 13 this. But it allows you to have -- uses, 14 you know, my understanding is something 15 around the ISA. You could make a 16 statement like that.</p> <p>17 Again, I'm not opining that 18 would be allowed because I don't know 19 what ARM's position might be. Even 20 that's not allowed to do that; in other 21 words, to say that you're aligned with 22 the ARM architect, you have to have some 23 kind of a relationship.</p> <p>24 Setting that aside, I'm 25 answering your hypothetical which is you</p>	<p style="text-align: right;">Page 336</p> <p>1 DR. RAVI DHAR 2 additional things. 3 Q Did you talk about ARM as a 4 stand-alone term in your opening report? 5 A I forget now. I mean this 6 again is blurry. But I talked ARM. And 7 we went through this many times. It's 8 ARM, ARM-based, ARM compliant. So ARM 9 would be the example of stand-alone. 10 So somebody saying it's an 11 ARM, especially in the context of 12 third-media and third-party mentions, I 13 would say often, the stand-alone was 14 used. 15 Q You keep referring to ARM, 16 ARM-based and ARM compliant? 17 A Right. 18 Q Is ARM compatible okay for 19 Qualcomm to use? 20 A No. It's not okay. I did 21 not analyze it, as I said in the morning, 22 which is not to say it is not okay or if 23 it's okay. I just haven't analyzed it 24 because the most dominant use I came 25 across was ARM-based and ARM compliant.</p>
<p style="text-align: right;">Page 335</p> <p>1 DR. RAVI DHAR 2 could make it very clear that ARM has no 3 connection here. But we are not excess 4 with ARM. 5 Q So it's your understanding 6 that in order for Qualcomm to use the 7 word ARM, it has to first say that it 8 does not have an ARM license for the 9 products you referred to as the Nuvia 10 products?</p> <p>11 MR. FUNG: Objection, form. 12 A No. I'm saying there could 13 be just one way to do that. I have not 14 thought about it, where it clearly made 15 clear there's no affiliation or 16 connection to ARM. So it could literally 17 state that and then say something that it 18 wants to would be one way to do it. 19 Q How did you conduct these 20 additional references that you added in 21 your reply report? 22 A As I said, I have seen some 23 of this before also. And basically, the 24 idea was to ask Brattle to see -- you 25 know, find additional -- if they're</p>	<p style="text-align: right;">Page 337</p> <p>1 DR. RAVI DHAR 2 Q But you have no opinion 3 about ARM compatible? 4 A That is correct. 5 Q Why did you not look at that 6 term? 7 A Because it was not used. I 8 mean I was looking at the terms that were 9 used in this marketplace. 10 Q If you look at Subsection G, 11 Mr. Palkhiwala says we wanted to develop 12 our own custom ARM CPU. 13 Is it your understanding 14 that a participant in the B2B industry 15 would understand that to be an ARM-based 16 CPU and not a Qualcomm developed custom 17 CPU? 18 MR. FUNG: Objection, form. 19 A No. They would also 20 understand that it has an association 21 with ARM, so that it uses the ARM brand, 22 which is the ARM CPU, which means it has 23 some process of core that's ARM. 24 Q Have you considered whether 25 it's true that Qualcomm's custom CPU is</p>

<p style="text-align: right;">Page 338</p> <p>1 DR. RAVI DHAR 2 built on the ARM architecture and 3 executes the ARM instruction set 4 architecture? 5 MR. FUNG: Objection, form. 6 A So ARM is a brand. So to 7 have an ARM CPU, my understanding is that 8 you need a license from ARM because 9 you're making a connection to ARM. 10 Whether the technology is similar, which 11 is, technology is one layer under the 12 brand, and I don't have an opinion on 13 that, whether it can execute. 14 But my opinion is when you 15 call something an ARM CPU, it means that 16 ARM brand has a connection to the Nuvia 17 product. 18 Q But you have no opinion 19 about whether it's true at the technology 20 level, that Qualcomm's custom CPU 21 operates using the ARM instruction set 22 architecture; right? 23 A I mean I understand it uses 24 it because my understanding in the 25 claims, it's [REDACTED]</p>	<p style="text-align: right;">Page 340</p> <p>1 DR. RAVI DHAR 2 footnotes here. 3 Q Right. 4 A transcript is different 5 from a written deck; right? 6 MR. FUNG: Objection, form. 7 A Oh, you mean a written deck. 8 Let's see. If I have not cited, then at 9 least sitting here, I don't recall, yeah. 10 Q Do you know who the audience 11 was for any of these oral presentations? 12 A So earnings call, audience 13 is wide, obviously investors, 14 competitors; customers can also attend. 15 And I think they do attend in the tech 16 world. So the audience can be quite 17 broad. 18 Q How do you determine that 19 there were customers on Qualcomm's 20 earnings call? 21 MR. FUNG: Objection, form. 22 A I don't specifically -- the 23 point I'm making here is ARM is -- 24 Qualcomm is kind of referring to this as 25 ARM or ARM-based or whatever we were</p>
<p style="text-align: right;">Page 339</p> <p>1 DR. RAVI DHAR 2 [REDACTED]. And so the dispute is 3 really about where was this technology 4 developed. But my focus was really on 5 the brand that people think there's a 6 connection to ARM. 7 Q Let's look at paragraph 31. 8 Actually, let me ask you one more 9 question about those statements that you 10 added. 11 These were all oral 12 statements; right? 13 A If these were all on the 14 presentation, some could be PowerPoints. 15 I don't know if they were all oral. But 16 they could be written decks. And then 17 there's a transcript of this, in 18 addition, that's available. 19 Q Right. 20 But you don't know that 21 they're written decks; you haven't cited 22 anything from a written deck here; right? 23 MR. FUNG: Objection, form. 24 A No. I talk about the 25 transcript was published and so on in the</p>	<p style="text-align: right;">Page 341</p> <p>1 DR. RAVI DHAR 2 talking earlier. And this is progress. 3 It's on analysts, it's on earnings call, 4 it's on public statements, it's on the 5 event. So, again, I'm looking at 6 multiple sources to make that point. 7 Q Did you do an assessment of 8 these sources to determine whether any of 9 Qualcomm's customers were at any of these 10 events? 11 A I wouldn't know how to do 12 that. But, no, I didn't do that. 13 Q Let's go to 31. 14 A Yes. 15 Q 31 is where you begin the -- 16 I think you called it a systematic 17 analysis? 18 A Comprehensive, yes. 19 Q Factiva database. 20 The Factiva database was 21 available at the time that you did your 22 opening report; right? 23 A I mean the database is 24 available. But I don't know if I had 25 access to it. You have to be a member or</p>

<p style="text-align: right;">Page 342</p> <p>1 DR. RAVI DHAR 2 some subscription for it. 3 Q You told me earlier that you 4 thought you had read some of the sources 5 in the Factiva database for your opening 6 report; is that right? 7 A I don't recall. I don't 8 recall. I said I saw some of the 9 statements in the Factiva database that I 10 had seen additionally. But I had not 11 looked sort of comprehensively at it in 12 the database itself. 13 Q You didn't try to run this 14 Factiva analysis for your opening report; 15 right? 16 A Sorry. What? 17 Q You did not do this 18 analysis? 19 A No. I obviously generated 20 some of the things that I had seen. But 21 I had not done the comprehensive search. 22 Q In paragraph 32, Subsection 23 B, you state, "Out of 95 articles in the 24 Factiva database that include the term 25 Snapdragon Elite in the article headline,</p>	<p style="text-align: right;">Page 344</p> <p>1 DR. RAVI DHAR 2 if they missed a couple of incorrectly, 3 it's possible. But the large majority of 4 them, this is why -- we wrote down, I 5 wrote down like multiple pages here where 6 I have reviewed this. And they clearly 7 refer to the Snapdragon or ARM-based. 8 Q Do you know how many of 9 these articles refer to this lawsuit? 10 A To this article, I did not 11 do a search on that term. One could do 12 that, yeah. 13 Q Would you think that 14 discussions about Snapdragon Elite that 15 also include the term ARM may include the 16 term ARM because they're discussing the 17 fact that [REDACTED] [REDACTED] 19 MR. FUNG: Objection, form. 20 A Sorry. Could you repeat 21 that? 22 Q Yes. 23 Would you think that 24 discussions about Snapdragon Elite that 25 also include the term ARM may include the</p>
<p style="text-align: right;">Page 343</p> <p>1 DR. RAVI DHAR 2 58 percent also include the term ARM in 3 the article body, and 37 percent also 4 include the term ARM-based in the article 5 body." 6 A Yes. 7 Q Do you know if the 8 Snapdragon Summit only involved 9 introduction of the Snapdragon Elite 10 chip? 11 MR. FUNG: Objection, form. 12 A I don't recall, sitting 13 here. I mean I've seen the thing. I'm 14 sure they're talking about a lot of 15 things in this one or two-day event in a 16 fancy resort. But I don't recall. 17 Q Did you evaluate whether use 18 of the term [REDACTED] [REDACTED] [REDACTED] [REDACTED] 22 A Well, I mean there was a 23 purpose. So that's why there's a lot of 24 examples in the next two pages, you know, 25 that try to highlight that. But maybe --</p>	<p style="text-align: right;">Page 345</p> <p>1 DR. RAVI DHAR 2 term ARM because they're discussing the 3 fact that [REDACTED] [REDACTED] 5 MR. FUNG: Objection to 6 form, calls for a legal conclusion. 7 A As I said, I have lots of 8 examples where a couple of them do. But 9 majority of them that I again illustrate 10 in the next few pages show to me the 11 context in which they were doing that. 12 Q But you don't know how many 13 of these mention the lawsuit? 14 A I did not do a search on 15 that. 16 Q Do you know what the 17 audience is for any of these 18 publications? 19 A So it's a wide audience 20 because they were wide kind of things. 21 Some are obviously broad business press, 22 technology press and people who are 23 interested in following. So there's not 24 a single audience. 25 Q Which of these publications</p>

<p style="text-align: right;">Page 346</p> <p>1 DR. RAVI DHAR 2 do you think Qualcomm's customers review? 3 MR. FUNG: Objection, calls 4 for speculation. 5 A Well, I don't know sitting 6 here. But many of them, like, you know, 7 Wall Street is read by a lot of people in 8 business, tech magazines, lots of things. 9 So I mean the point I'm trying to make is 10 it's pervasive. And I'm not trying to 11 say this X Customer read it twice. This 12 shows very progressive use of the term. 13 And frankly, I don't know if Qualcomm 14 doesn't say that it doesn't use it. 15 So the issue is, I have said 16 that the terms are false or misleading. 17 I haven't seen anywhere, Qualcomm say 18 that we haven't used this term. So 19 doesn't seem that controversial to me 20 that I found so many examples of use of 21 ARM-based. 22 Q In the next section that 23 starts on page 30, you collect financial 24 analyst reports that use the term [REDACTED] [REDACTED] and [REDACTED]. Do you see</p>	<p style="text-align: right;">Page 348</p> <p>1 DR. RAVI DHAR 2 Q If there's confusion in the 3 marketplace, but Qualcomm's customers are 4 not confused, does it matter? 5 MR. FUNG: Objection, form. 6 A Yes. I mean it matters. 7 But as I said, all the reasons why there 8 is likely confusion in the marketplace 9 based on how it's used. And this is 10 just -- this section is just evidence 11 that we see that in the financial analyst 12 community. 13 Q Are financial analysts 14 Qualcomm's customers? 15 A No. But it shows that they 16 are talking to the industry people, 17 including, you know, potentially 18 Qualcomm. They're analyzing the thing. 19 So analyzing the roadmap. And they seem 20 to be confused here. 21 Q Let's go to paragraph 48. 22 At the end of this 23 paragraph, you say, "Based on my 24 extensive research and analysis and 25 drawing from my expertise, I've reached</p>
<p style="text-align: right;">Page 347</p> <p>1 DR. RAVI DHAR 2 that? 3 A Yes. 4 Q Is there a distinction in 5 your mind in how Qualcomm's customers may 6 view financial analyst reports versus the 7 other press you cited? 8 A Sure. So I think this is a 9 little bit more to say that there is, in 10 my opinion, confusion in the marketplace 11 with the use of these terms. So the 12 focus here is not so much to say that 13 customers would have seen all these 14 reports. But it's evidence that they are 15 using the words that maybe Qualcomm used; 16 in other words, where is this coming 17 from. It has to come from somewhere. 18 And so this is just a way to 19 say that, hey, there is already confusion 20 if these terms are being used, regardless 21 of how many customers see it and what 22 that does. So the use by press to me is 23 kind of another evidence the analysts 24 were using it, that they are potentially 25 confused.</p>	<p style="text-align: right;">Page 349</p> <p>1 DR. RAVI DHAR 2 the conclusion that Qualcomm's use of the 3 ARM trademarks is likely to result in 4 customer confusion, and as discussed in 5 Section 6, harm to ARM, including its 6 brand." 7 Do you see that? 8 A Yes. 9 Q Is the extensive research 10 you referred to here just the research 11 you've done for this case or are you 12 referring to other research? 13 A No. Just for this case. 14 Q And when you say you're 15 drawing on your expertise, is there any 16 specific expertise you're drawing on? 17 A This is broadly. So you 18 asked me questions around, you know, my 19 understanding of why ARM-based would be 20 based on the brand. 21 And so those would be sort 22 of based on my expertise, I think. And, 23 of course, I mentioned testimony as well. 24 But also, my expertise would come in 25 there.</p>

<p style="text-align: right;">Page 350</p> <p>1 DR. RAVI DHAR 2 Q Are you relying on any 3 specific academic literature in your 4 opinion about likelihood of confusion? 5 MR. FUNG: Objection, form. 6 A Yes. I mean to the extent 7 part of the strength of the market, part 8 of that opinion, that's based on the 9 academic, you know, list we talked about 10 earlier, commercial strength. 11 Then in terms of likelihood 12 of confusion, we talked about academic 13 literature on, you know, the B2B context, 14 and I described what the B2B context is 15 and why sophistication would not in this 16 case change any likelihood of confusion, 17 those kinds of literature that I cite 18 here. 19 Q And the literature that you 20 cited is all in the footnotes? 21 A Some are in the two 22 documents, between the first and second 23 one, but yes. 24 Q And there's no other 25 academic literature that you're relying</p>	<p style="text-align: right;">Page 352</p> <p>1 DR. RAVI DHAR 2 the ARM brand. And Qualcomm is a trusted 3 company itself. 4 So basically, people will 5 believe. [REDACTED] [REDACTED] And so there would be 8 no reason to question it, that this is 9 somehow, you know, incorrect because the 10 likelihood of confusion, the idea is that 11 when you put a little bit more care and 12 thought, then it might become clear that 13 is -- well, this is not really, you know, 14 X or Y, whatever the brand is, oh, this 15 is really not Coca-Cola, the C was 16 backwards or something like that. 17 And so what I'm saying is 18 here, there would be nothing -- there's 19 nothing here that sophistication per se 20 would take care of based on the 21 statements that I've made in here. 22 Q So if the products you 23 describe is the [REDACTED] [REDACTED] is it 25 your opinion that then there's no</p>
<p style="text-align: right;">Page 351</p> <p>1 DR. RAVI DHAR 2 on besides what's in the footnotes? 3 A That's correct. 4 Q In paragraph 50, you 5 say, "Professor Steckel's contention that 6 the unique context of B2B transactions 7 undermines your assessment of the 8 likelihood of confusion caused by 9 Qualcomm's use of the term ARM-based or 10 ARM compliant is baseless, likewise 11 baseless." 12 A Right. Sorry. The first 13 sentence? 14 Q Yes. 15 A Okay, yes. 16 Q What's the basis of your 17 assertion there? 18 A So this is a discussion we 19 are having on degree of care and 20 exercising. And as I said, you know, a 21 statement that is seen as false, in other 22 words, it's not likely to use a slightly 23 different word like ARM Me or ARM Plus 24 something that would -- careful, would 25 say, oh, this is not ARM. You're using</p>	<p style="text-align: right;">Page 353</p> <p>1 DR. RAVI DHAR 2 likelihood of confusion? 3 MR. FUNG: Objection, form. 4 A So, in other words, which I 5 said is the assumption I made, in other 6 words. [REDACTED] [REDACTED] [REDACTED], and the 10 technology did not come from Nuvia, and 11 so let's say -- so, yes, I think the 12 question is that it's properly, you know, 13 part of -- it's [REDACTED] at that time 14 because it's under a proper license and 15 whatever that royalty stream and 16 verification. It still technically 17 didn't have the verification because I 18 guess ARM refused it or something. So it 19 would need that piece potentially. 20 But when it's a proper 21 license, then the question is, if that's 22 what the ruling is, then what's the basis 23 for not verifying. Again, I'm not a 24 lawyer. So I'm not opining on that. 25 But, to me, it would need that step.</p>

<p style="text-align: right;">Page 382</p> <p>1 DR. RAVI DHAR 2 A Yeah. I think he had a 3 statement -- oh. It's in the statement 4 before this. Arguably strong. So I'm 5 just saying that he's kind of made it 6 flippantly without doing any analysis. 7 And I don't disagree, by the 8 way, that Qualcomm is -- we had this 9 discussion in the morning, based on the 10 strength, sales and all that. But I'm 11 just saying that he made a statement that 12 I didn't see him do any analysis on the 13 Qualcomm strength. 14 Q You don't disagree with 15 Professor Steckel, that Qualcomm is an 16 arguably strong brand? 17 A Again, I haven't done the 18 analysis on Qualcomm. But sitting here, 19 if I had to, on the dimensions that I 20 looked at within the industry, Qualcomm 21 would also be a potentially strong brand. 22 All I'm saying is he criticized me for 23 not doing this, what he wanted me to do, 24 which was to do a survey. But he didn't 25 do any of the sort and made the similar</p>	<p style="text-align: right;">Page 384</p> <p>1 DR. RAVI DHAR 2 page 14. 3 A Paragraph 18? 4 Q Yes. 5 A Yes. 6 Q The last sentence of this 7 sentence says, "Further, given the 8 sophisticated customers with a likely 9 knowledge of ARM, customers can be and 10 wanted to perceive the meaning of 11 compliant with ARM as a product that has 12 been verified and validated by ARM." 13 Do you see that? 14 A Yes. 15 Q What is the basis for your 16 expectation? 17 A So this is this idea that 18 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] So people in the 24 industry would be more likely to know 25 that than the end consumer.</p>
<p style="text-align: right;">Page 383</p> <p>1 DR. RAVI DHAR 2 opinion. 3 Q Do you think he said in his 4 report that you had to do a survey? 5 A Just customer, some language 6 around survey of customers, yeah. On 7 paragraph 9, from a survey of customers, 8 you know, even though he's written a 9 paper on this that says you don't have to 10 do a survey. But something to that 11 effect was one of his, you know, 12 complaints. 13 THE VIDEOGRAPHER: Counsel, 14 I hate to interrupt. But I have 15 about ten minutes before I need to 16 change the tape. 17 MS. MORGAN: We can take a 18 break, and you could change it. 19 THE VIDEOGRAPHER: Off the 20 record, 5:03 p.m. 21 (A short recess was taken.) 22 THE VIDEOGRAPHER: Back on 23 the record, 5:13 p.m. 24 Q Dr. Dhar, let's go to 25 paragraph 18 of your reply which is on</p>	<p style="text-align: right;">Page 385</p> <p>1 DR. RAVI DHAR 2 Q But how did you form your 3 expectation that people in the industry 4 would know that? Did you do any research 5 on what people in the industry understand 6 about the term, [REDACTED] 7 A So [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]. But customers 15 would know that it's a [REDACTED] [REDACTED] [REDACTED] that [REDACTED] [REDACTED] would mean that there's a 20 process around that of [REDACTED] [REDACTED] people who know the 22 different types of [REDACTED] and 23 [REDACTED] as I said, I don't know if [REDACTED] [REDACTED] but [REDACTED]</p>

<p style="text-align: right;">Page 386</p> <p>1 DR. RAVI DHAR 2 Q Are you talking customers of 3 Qualcomm or customers of ARM? 4 A Customers of Qualcomm. 5 Q So your expectation is just 6 based on the fact that they are customers 7 of Qualcomm and, therefore, are 8 sophisticated business entities that buys 9 products from Qualcomm? 10 A Who buy ARM-based, you know, 11 chips that are licensed from -- buy chips 12 for many different manufacturers, 13 including Qualcomm. And they would know 14 that -- they know that ARM is a player in 15 this market. And [REDACTED] has, you 16 know, certain meaning with that, in 17 addition to the connection to the brand. 18 [REDACTED] [REDACTED].</p> <p>21 Q So based on the fact that 22 they're Qualcomm customers, you just 23 expect that they would understand what 24 [REDACTED] means? 25 MR. FUNG: Objection, form.</p>	<p style="text-align: right;">Page 388</p> <p>1 DR. RAVI DHAR 2 A Sorry. I haven't reached 3 that. 38, you said? 4 Q Yes. 5 Do you see that the heading 6 now that says, "Professor Steckel 7 Provides No Support For His Claim That 8 Qualcomm's Use Of ARM-Based And Other 9 Phrases Constitutes Permissible 10 Referential Use"?</p> <p>11 A Yes. I mean he cites 12 something that I then go on to say why it 13 doesn't say what he claims it says. 14 Q That's what I want to ask 15 you about. 16 You said Professor Steckel 17 mischaracterizes that ARM's own publicly 18 available trademark use guidelines 19 explicitly instructs third-parties to 20 describe their products as ARM-based in 21 order to accurately describe the 22 relationship between the third-party 23 technology and ARM technologies. 24 And your quibble with it is 25 that the trademark guidelines do not</p>
<p style="text-align: right;">Page 387</p> <p>1 DR. RAVI DHAR 2 A Based on the customers of -- 3 I would call it broader than Qualcomm 4 customers, like the category customers. 5 So people who are buying these chips, if 6 you'd like. 7 Q Like business-to-business 8 customers in the semiconductor industry? 9 A Correct. 10 Q So it's your assessment that 11 by virtue of being business-to-business 12 customers in the semiconductor industry, 13 those customers would understand the 14 meaning of ARM compliant to imply that 15 the product was verified or validated by 16 ARM? 17 MR. FUNG: Objection, form. 18 A Correct. 19 Q Let's go to paragraph 38. 20 You have an opinion here 21 that Professor Steckel provides no 22 support for his claim that Qualcomm's use 23 of ARM-based and other phrases 24 constitutes permissible preferential use. 25 Do you see that?</p>	<p style="text-align: right;">Page 389</p> <p>1 DR. RAVI DHAR 2 instruct third-parties to describe their 3 products as ARM-based. Do you see that? 4 MR. FUNG: Objection, form. 5 A I mean my quibble -- it's 6 not a quibble. It's a big one. He 7 doesn't understand it. I scratch my 8 head. What he says makes no sense. 9 So what that third-party 10 guideline says is that if a third-party 11 wants to refer to -- third-party, which 12 may have nothing to do with ARM's 13 product, let's say. 14 Let's say I am now 15 Qualcomm's customer, they'd want to say 16 our laptops have Snapdragon and have 17 ARM-based processes, let's say. To me, 18 that's a third-party. It could be a 19 press too. But that's a third-party. 20 And all it says is that, 21 hey, if you're a third-party, you should 22 accurately describe the connection. And 23 I'm saying that by calling it ARM-based, 24 you're now describing ARM-based means a 25 connection to the thing. The way he</p>

<p style="text-align: right;">Page 390</p> <p>1 DR. RAVI DHAR 2 wrote it made no sense, as if the 3 third-party guidelines are saying, hey, 4 you're allowed to say ARM-based. That's 5 what it read like to me. And it says 6 nothing of the sort, is what I'm trying 7 to say.</p> <p>8 (The above-referred-to 9 document was marked as QX Exhibit 222 10 for identification, as of this date.)</p> <p>11 Q Let me mark this as QX 222.</p> <p>12 Is that the trademark use 13 guidelines that we were just talking 14 about?</p> <p>15 A Yes.</p> <p>16 Q It says on the front of 17 these guidelines that they're guidelines 18 for third-parties when referring to ARM's 19 trademarks. Third-parties are not 20 licensees; right?</p> <p>21 A Correct.</p> <p>22 Q And if you go to page 3 at 23 the bottom, you'll see a section that 24 says, "Referential Use Of ARM's 25 Trademarks"?</p>	<p style="text-align: right;">Page 392</p> <p>1 DR. RAVI DHAR 2 A And I have not seen any 3 evidence in this case, and you asked me 4 this earlier, other than third-party 5 licensees or third-parties who are saying 6 ARM-based and who don't have an ALA or a 7 TLA. And my understanding is I haven't 8 seen that, yeah.</p> <p>9 Q So it's your view that this 10 section that defines referential use of 11 ARM's trademarks is not useable by any 12 third-party; right?</p> <p>13 MR. FUNG: Objection, form.</p> <p>14 A If they don't have a 15 license, correct. You can't say you're 16 ARM-based if it's not accurate.</p> <p>17 Q And by virtue of it 18 describing a third-party product, that 19 would be not a licensee product; right?</p> <p>20 A That would be?</p> <p>21 Q It would not be a licensee 22 product; it's a third-party product?</p> <p>23 MR. FUNG: Objection, form.</p> <p>24 A Yeah. I don't know what 25 they mean by relevant third-party</p>
<p style="text-align: right;">Page 391</p> <p>1 DR. RAVI DHAR 2 A Right.</p> <p>3 Q It states here, "You may 4 refer to ARM-based products by using the 5 word based between the relevant ARM 6 trademark and the relevant third-party 7 product."</p> <p>8 Do you see that?</p> <p>9 A Right.</p> <p>10 Q When it says third-party 11 product, you understand that to be 12 referring to the product of a 13 non-licensee?</p> <p>14 A That's what it could be. 15 But it says it has to be accurate, fair 16 and not misleading. And to me, as I've 17 said, it's misleading if there's no 18 license from ARM.</p> <p>19 Q So it's your opinion that a 20 third-party could not use the word 21 ARM-based between the relevant ARM 22 trademark and the third-party product 23 without being inaccurate, unfair and 24 misleading?</p> <p>25 MR. FUNG: Objection, form.</p>	<p style="text-align: right;">Page 393</p> <p>1 DR. RAVI DHAR 2 product. It could have the licensing 3 product in that. As I said, Qualcomm, 4 [REDACTED] And it 6 says we have ARM-based microprocessors. 7 And I'm saying you couldn't 8 say that. That would be false. And you 9 couldn't use the word ARM-based because 10 you're a third-party, if you're Lenovo, 11 but you're not describing the accurate 12 relationship because the Snapdragon chips 13 are not ARM-based here.</p> <p>14 Q So read together, where it 15 says you may refer to ARM-based products 16 by using the word based between the 17 relevant ARM trademark and the relevant 18 third-party product and in this 19 situation, you may use any appropriate 20 noun after the word based if it is 21 accurate, fair and not misleading, and it 22 complies with these guidelines, you would 23 say it's impossible that a third-party 24 could use the word based and also have it 25 be accurate, fair and not misleading?</p>

<p style="text-align: right;">Page 394</p> <p>1 DR. RAVI DHAR 2 MR. FUNG: Objection, form. 3 A In this case because if your 4 chip -- as [REDACTED] [REDACTED] 6 yes, it would not be -- it would be 7 false. 8 Q Can you think of any 9 situation in which a third-party could 10 refer to [REDACTED] [REDACTED] [REDACTED] 14 A [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 23 Q And you do not dispute that 24 these guidelines are about third-parties 25 who are not licensed; right?</p>	<p style="text-align: right;">Page 396</p> <p>1 DR. RAVI DHAR 2 Qualcomm, Nuvia product, a third-party, 3 like Lenovo or anybody else, could not 4 say that our product are ARM-based 5 because it's not ARM-based. It's not 6 accurate. So Lenovo doesn't have to have 7 the license, but neither did Qualcomm. 8 So you couldn't say that. 9 Q So a third-party could be 10 unlicensed and could still use the word 11 ARM-based? 12 A If it is accurate. So if 13 you say we use [REDACTED] [REDACTED] and if it is [REDACTED]; in other 15 words, it has a license, then it would be 16 fine. 17 Q But by virtue of it being a 18 third-party, doesn't have a license; 19 right? 20 A No, no. But my point is the 21 component of your product does. So you 22 want to say here, next generation of 23 laptops has an [REDACTED]. If 24 that was true, which it's not, in my 25 opinion, then you could say that.</p>
<p style="text-align: right;">Page 395</p> <p>1 DR. RAVI DHAR 2 A Right. But as I said, his 3 interpretation is nonsensical. 4 Q Your interpretation is that 5 there can be no referential use; right? 6 A No. There can be. But this 7 is not referential use. The use that 8 your client has done is false and 9 misleading. And I said referential use, 10 like we accept MasterCard, is an example 11 of that. 12 So you can refer to the 13 technical attributes, assuming that ARM 14 allows, would not implicate the brand. 15 But using ARM-based, you're implicating 16 the brand, and that is not referential 17 use. That implies a connection with ARM 18 brand. 19 Q But putting Qualcomm aside, 20 you would say that under this section, 21 that it's impossible for any third-party 22 that's not licensed to use the word 23 based -- 24 A No. I didn't say that. I 25 said if you have a false license of</p>	<p style="text-align: right;">Page 397</p> <p>1 DR. RAVI DHAR 2 So Lenovo doesn't have to 3 have the license. Lenovo is a 4 third-party. But Lenovo could say that 5 my product has a CPU or a system on chip 6 that combines the best of Qualcomm and 7 ARM-based technology or ARM-based would 8 be fine, if it is -- if Qualcomm had the 9 proper license. But if Qualcomm doesn't 10 have the proper license, then it's not 11 true for it to say that. 12 Q Is that limitation provided 13 for in the guidelines? 14 MR. FUNG: Objection, form. 15 A You mean in the reference 16 use here? 17 Q Yes. 18 A As I said, his 19 interpretation is nonsensical. It made 20 no sense to me. So it's very clear, to 21 me, what I said. 22 Q Did you ask anyone at ARM 23 what the guidelines mean? 24 A For me, no. I didn't ask 25 specifically. I kind of -- what it says</p>

<p style="text-align: right;">Page 398</p> <p>1 DR. RAVI DHAR 2 here was clear to me. 3 Q And you didn't ask how 4 third-parties used the guidelines; right? 5 A I did not ask. Again, when 6 you say ask, I only had one conversation 7 with them. So I did not ask them 8 anything specifically that I recall. 9 Q But you didn't ask for 10 documents that would convey how 11 third-parties use these trademark 12 guidelines through counsel; right? 13 A Beyond this, no, I did not 14 ask that. 15 Q And you've done no 16 evaluation of how third-parties use the 17 term ARM-based; right? 18 MR. FUNG: Objection, form. 19 A I have not done a systematic 20 analysis of that. 21 MS. MORGAN: I have no 22 further questions.</p> <p>23 EXAMINATION BY 24 MR. FUNG: 25 Q Dr. Dhar, I just have a few</p>	<p style="text-align: right;">Page 400</p> <p>1 2 A Correct. 3 Q You were able to form these 4 opinions without using a survey? 5 A Correct. 6 Q You were able to form your 7 opinions without speaking with decision 8 makers in the B2B semiconductor market? 9 A Correct. 10 MR. FUNG: No further 11 questions. 12 MS. MORGAN: Got nothing. 13 THE VIDEOGRAPHER: We are 14 off the record concluded for the day, 15 5:27 p.m. Eastern Standard Time. 16 (Time noted: 5:27 p.m.) 17 18</p> <hr/> <p style="text-align: center;">DR. RAVI DHAR</p> <p>19 20 21 Subscribed and sworn to 22 before me on this _____ day 23 of _____, 2024.</p> <hr/> <p style="text-align: center;">NOTARY PUBLIC</p>
<p style="text-align: right;">Page 399</p> <p>1 DR. RAVI DHAR 2 questions. 3 In your opening and reply 4 reports, you have formed opinions 5 relating to the likelihood of confusion; 6 is that right? 7 A Yes. 8 Q You were able to form your 9 opinions about the likelihood of 10 confusion based on the current evidence 11 in the case; is that right? 12 A Correct. 13 Q And you were able to form 14 these opinions without conducting a 15 survey? 16 A Correct. 17 Q You were also able to form 18 your opinions without speaking with 19 decision makers in the B2B market? 20 A In the semiconductor market, 21 correct. 22 Q In your opening and reply 23 reports, you have formed opinions 24 relating to the strength and meaning of 25 ARM's branded trademarks; is that right?</p>	<p style="text-align: right;">Page 401</p> <p>1 2 I N D E X 3 4 E X A M I N A T I O N 5 EXAMINATION 6 Ms. Morgan 5 7 Mr. Fung 398 8 E X H I B I T S 9 10 QX Description Page 11 QX Exhibit 216 Opening report 19 12 QX Exhibit 217 Reply report 21 13 QX Exhibit 218 Transcript 180 14 QX Exhibit 219 Arbitration 251 15 decision 16 QX Exhibit 220 Deposition 310 17 transcript 18 QX Exhibit 221 Deposition 312 19 transcript 20 QX Exhibit 222 Trademark use 390 21 guidelines 22 23 24 25</p>

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2 CERTIFICATION

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4

5 I, ANTHONY GIARRO, a Shorthand Reporter
6 and a Notary Public, do hereby certify that
7 the foregoing witness, DR. RAVI DHAR, was duly
8 sworn on the date indicated, and that the
9 foregoing, to the best of my ability, is a
10 true and accurate transcription of my
11 stenographic notes.

12 I further certify that I am not employed
13 by nor related to the above named witness.



17 ANTHONY GIARRO

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Page 403

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2 ERRATA SHEET

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6 NAME OF CASE: ARM versus Qualcomm, et al.
DATE OF DEPOSITION: May 3, 2024

7 NAME OF DEPONENT: Dr. Ravi Dhar

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DR. RAVI DHAR

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23 SUBSCRIBED AND SWORN TO BEFORE ME
THIS ____ DAY OF _____, 20 ____.

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(NOTARY PUBLIC) MY COMMISSION EXPIRES:

102 (Pages 402 - 403)

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EXHIBIT 14

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ARM LTD., A U.K. Corporation,

Plaintiff

v.

QUALCOMM INC., a Delaware Corporation,
QUALCOMM TECHNOLOGIES, INC., a
Delaware Corporation, and NUVIA, INC., a
Delaware Corporation,

Defendants.

C.A. No. 22-1146-MN

**EXPERT REPLY REPORT OF RAVI
DHAR REGARDING TRADEMARK
INFRINGEMENT**

**CONTAINS HIGHLY
CONFIDENTIAL – ATTORNEYS’ EYES
ONLY INFORMATION**

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I. Qualifications

1. I previously submitted a report in this matter on behalf of the Plaintiff, Arm Ltd. (“Arm”), on December 20, 2023.¹ An overview of my qualifications is provided in Section I of my Opening Report. A list of the materials I have relied upon in preparation of this report is included in Appendix A.

II. Assignment

2. Here, I have been asked by Morrison Foerster LLP to evaluate and respond to the opinions of Professor Joel Steckel in his expert report submitted on February 27, 2024.² In carrying out my assignment, I have been supported by an economic consulting firm, The Brattle Group, whose staff worked under my direction to conduct research and assist me in this matter. In addition to my standard billing rate of \$950 per hour, I also receive compensation from The Brattle Group based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter nor my compensation from The Brattle Group is in any way contingent or based upon the conclusions I reach or on the outcome of this matter.

III. Summary of Opinions

3. Based on my review of the Steckel Rebuttal Report, I have determined that it suffers from serious conceptual and methodological flaws that render its conclusions unreliable. Accordingly, the assertions and conclusions contained in the Steckel Rebuttal Report do not change the opinions set forth in my Opening Report. Below, I summarize my responses to the Steckel Rebuttal Report and explain why the assertions therein do not alter my opinions.
 - a. **First,** I relied on well-established principles and academic research on the theory and practice of branding in making my determination that the Arm Trademarks and brand are distinctive

¹ Expert Report of Ravi Dhar, *Arm Ltd. v. Qualcomm Inc, Qualcomm Technologies, Inc., and NUVIA Inc.* (C.A. No. 22-1146-MN), December 20, 2023 (“Dhar Opening Report” or “my Opening Report”).

² Expert Rebuttal Report of Joel Steckel, *Arm Ltd. v. Qualcomm Inc, Qualcomm Technologies, Inc., and NUVIA Inc.* (C.A. No. 22-1146-MN), February 27, 2024 (“Steckel Rebuttal Report”).

and strong in the U.S. marketplace context. Professor Steckel has provided no evidence that contradicts my conclusion.

- b. **Second**, as explained in my Opening Report, the available evidence shows that Qualcomm's unlicensed use of Arm's Trademarks—including the terms "Arm," "Arm-based," and "Arm-compliant"—creates a likelihood of confusion among customers that is amplified by similar usage of these terms in the third-party press.³ Claims to the contrary made by Professor Steckel are unsupported. Professor Steckel fails to address Qualcomm's unlicensed use of the stand-alone term "Arm" in describing the Nuvia Products. Moreover, he asserts—incorrectly and without any evidentiary support—that Qualcomm's unlicensed use of the terms "Arm-based" and "Arm-Compliant" will not lead to customer confusion about the Nuvia Products' connection with Arm and instead serve only as indicators of the technical attributes of a chip.⁴ Because Professor Steckel fails to appropriately address either of these two issues, the notion that sophisticated customers, familiar with Arm's verification process and requirements, will not be confused by Qualcomm's misstatements—which have been amplified by third parties such as the media—is speculative and unreliable.
- c. **Third**, I used well-established principles and academic research on the theory and practice of branding to demonstrate that Qualcomm's unlicensed use of the terms "Arm," "Arm-based," and "Arm-compliant" is likely to result in harm to the Arm brand, and Professor Steckel has provided no evidence to the contrary.

³ As discussed in the Dhar Opening Report (¶¶ 107-121) and Section V.C below, the media—like Qualcomm itself—also uses these terms to refer to the Nuvia Products (and the newly launched Snapdragon X Elite).

⁴ Professor Steckel states that these terms communicate that the Nuvia Products are compatible with the Arm Instruction Set Architecture ("ISA"). Steckel Rebuttal Report, ¶¶ 64-66. As explained in my opening report, the Arm ISA defines the software instructions that can be executed by the CPU. Dhar Opening Report, ¶ 98.

IV. The Arm Trademarks and Brand Are Distinctive and Strong, and Professor Steckel Has Provided No Evidence to the Contrary

IV.A. I Used Well-Established Principles to Evaluate the Strength of the Arm Trademarks and Brand

4. My conclusion that the Arm Trademarks and brand are distinctive and strong in the U.S. marketplace is based on well-established principles of branding and academic research on the theory and practice of branding, which I cite heavily in Sections VII and VIII of my Opening Report. Section VII of my Opening Report discusses the concept and benefits of a strong brand in the marketplace context, as well as the components of a distinctive and strong brand identity. Section VIII then applies these concepts and demonstrates that Arm has built a distinctive and strong brand in the business-to-business (“B2B”) market in which it competes.
5. As I explain in my Opening Report, the Arm Trademarks (i.e., U.S. Registration Nos. 5,692,669 and 5,692,670) are distinctive. I understand that U.S. Registration No. 5,692,669—pertaining to the Arm word mark in standard characters—has a claimed first use and first use-in-commerce date of November 30, 1990.⁵ I also understand that U.S. Registration No. 5,692,670—pertaining to the stylized ARM mark featuring the word “arm” in all lowercase letters—has a claimed first use and first use-in-commerce date of August 1, 2017.⁶ In order to protect against potential misuse of the Arm Trademarks, Arm provides clear guidelines on the use of the Arm Trademarks in the marketplace, including the Arm Trademark Use Guidelines and Arm Branding Guidelines.⁷ Moreover, I am unaware of any other company in the semiconductor industry using anything similar to the Arm Trademarks.
6. It is also important to recognize that my analysis of the strength of the Arm Trademarks in the U.S. marketplace context relies on well-established principles. In particular, my detailed analysis of the strength of a brand based on academic principles is directly linked to the value it creates

⁵ Dhar Opening Report, ¶¶ 30-31.

⁶ Dhar Opening Report, ¶¶ 30-31.

⁷ See, e.g., “Arm Trademark Use Guidelines,” Arm, <https://www.arm.com/company/policies/trademarks/guidelines-trademarks>; “Arm Branding Guidelines,” Arm, <https://www.arm.com/company/policies/trademarks/guidelines-brand>.

for Arm by attracting customers to its brand, which symbolizes the value offered to consumers.⁸ Furthermore, it is my understanding that the commercial strength of a trademark is based on what it achieves through use and renown.⁹ Accordingly, my Opening Report evaluated the commercial strength of the Arm Trademarks through an analysis of Arm's sales success and renown (e.g., reputation, fame, awards, and accolades). Beyond Arm's sales success and renown, the fact that Qualcomm uses the Arm Trademarks (even when it is not licensed to do so) indicates that the Arm brand is valuable. Moreover, Professor Steckel is incorrect in asserting that a survey of customers is required to establish a trademark's commercial strength.

7. As explained in Section VIII.B of my Opening Report, Arm's sales success¹⁰ and renown (e.g., reputation, fame, awards, and accolades)¹¹ demonstrate that the Arm Trademarks and brand are commercially strong. Moreover, I provide additional information regarding Arm's sales success (including Arm's market share and revenues) and renown (including media mentions about Arm's reputation and fame) below. Arm provides value through its mark by signaling to others

⁸ Academic literature establishes that brand strength leads to strong financial outcomes. See, e.g., Vanitha Swaminathan, Sayan Gupta, Kevin Lane Keller, and Donald Lehmann, "Brand actions and financial consequences: a review of key findings and directions for future research," *Journal of the Academy of Marketing Science* 50 (2022): pp. 639-664; Kevin Lane Keller and Donald R. Lehmann, "Brands and Branding: Research Findings and Future Priorities," *Marketing Science* 25(6) (2006): pp. 740-759; and Kevin Lane Keller and Donald R. Lehmann, "How Do Brands Create Value," *Marketing Management* (May/June 2003): pp. 26-31.

⁹ J. Thomas McCarthy, *McCarthy on Trademarks and Unfair Competition*, 4th ed., (Danvers: Thomson Reuters, June 2017), Chapter 15, 15-8, footnote 14 ("If [a designation] is an inherently distinctive designation, then it does not need to acquire distinctiveness though [sic] acquiring a 'secondary meaning': what it achieves through use and renown is added 'strength.'").

¹⁰ See, e.g., Dhar Opening Report, ¶ 99(b) ("More than 260 companies have reported shipping Arm-based chips this year. And Arm CPUs were used in more than 250 billion chips last year."), ¶ 103 (citing Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705: "Arm CPUs run the vast majority of the world's software, including the operating systems and applications for smartphones, tablets and personal computers, data centers and networking equipment, and vehicles, as well as the embedded operating systems in devices such as smartwatches, thermostats, drones, and industrial robotics. [Arm] estimate[s] that approximately 70% of the world's population uses Arm-based products, and the scale of Arm's reach continues to expand, with more than 30 billion Arm-based chips reported as shipped in the fiscal year ended March 31, 2023, alone.").

¹¹ See, e.g., Dhar Opening Report, ¶ 99(a) ("The Arm Trademarks have consistently been recognized by the World Intellectual Property Organization for its global goodwill, reputation, fame, and distinctiveness."), ¶ 99(c) ("Arm has received many awards and accolades such as Overall Winner of the International Trade Awards in 2010; the Queen's Award for Enterprise in 2011; the Linley Group's Best processor IP in 2014, 2018, and 2019; and TSMC OIP Partner of the Year for Processor IP for 2009-2014, 2019, 2020, and 2021.").

that a product has interoperability with the Arm ecosystem,¹² rather than a different ecosystem;¹³ that is, the Arm Mark is not just Arm's source identifier, but it is further confirmation that a product has been through a specific Arm verification process and will work correctly with other Arm products and software. That signal conveys value because the validation process involves extensive time and input from Arm engineers.¹⁴

a. Arm's Sales Success

- i. Arm defines its total addressable market "to include all chips that can contain a processor . . . [including] the main controller chips in smartphones, PCs, digital TVs, servers, vehicles and networking equipment."¹⁵ As of December 2022, Arm was estimated to have an approximately 49% market share across all chips in its addressable market, representing an aggregate value of \$98.9 billion in chips containing Arm technology.¹⁶ Additionally, as far back as a decade ago in 2014, Arm was estimated to have an approximately 39% market share across all chips in its addressable market.¹⁷

¹² "ARM verifies its IP for interoperability before it is released to partners to make sure it is suitable for a wide range of applications. . . . Frank Schirrmeister of Cadence Design Systems cites: 'As an ARM ecosystem partner, Cadence relies on pre verified ARM cores and subsystems that can be easily integrated into the designs that we use to validate our tool interoperability. ARM's software-driven verification approach reflects the industry's shift toward the portable stimulus specification and allows us to validate the integration and interoperability of ARM cores and subsystems on all Cadence System Development Suite engines, including simulation, emulation, and FPGA-based prototyping engines.' Eoin McCann, *System Validation at Arm* (April 2016), <https://community.arm.com/arm-community-blogs/b/architectures-and-processors-blog/posts/system-validation-at-arm-enabling-our-partners-to-build-better-systems>.

¹³ For example, the "About this Mac" feature in an Apple computer will tell the user whether the "Processor" is based on an Intel x86 or Arm processor. *How can I tell whether I have an "Intel" or an "Apple Silicon" based Mac?*, <https://focusritepro.zendesk.com/hc/en-gb/articles/360017409720-How-can-I-tell-whether-I-have-an-Intel-or-an-Apple-Silicon-based-Mac>.

¹⁴ "For example, on top of the >10,000 hours of validation run time done on each core model, the latest version of the ARM Juno test chip was subjected to an additional 6,130 hours of system validation run time." M.S. Hrishikesh, Madhusudhan Rajagopalan, Sujatha Sriram, and Rashmin Mantri, "System Validation at Arm; Enabling our Partners to Build Better Systems (April 2016), p. 11, https://developer.arm.com-/media/Arm%20Developer%20Community/PDF/System%20IP/System_Validation_at_ARM_Enabling_our_partners_to_build_better_systems.pdf?revision=a82b4e93-4118-4a3a-ba5f-70e38f6b4616&hash=88D9B7CF58BE13B124E43EE538D21F4D#:~:text=For%20exa.

¹⁵ Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705, at -717.

¹⁶ Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705, at -718.

¹⁷ Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705, at -720.

- ii. Moreover, Arm has maintained a market share greater than 99% for the primary chip in smartphones (i.e., mobile applications processor) “for many years, by virtue of all key mobile operating systems depending on Arm processors.”¹⁸
- iii. For the fiscal year ending March 31, 2023, Arm’s total revenue was approximately \$2.7 billion.¹⁹ Moreover, as far back as a decade ago in 2014, Arm’s total revenue was approximately \$1.3 billion.²⁰
- iv. In addition to information about Arm’s sales success presented in my Opening Report, the above information regarding Arm’s market share and revenues demonstrates the company’s long-standing sales success, along with its continued growth over the last decade.

b. Arm’s Renown

- i. A June 2022 article from *The Economist* titled “Why everyone wants Arm” describes “the ubiquity of [Arm’s] products” and states that “Arm has grown to the point where nearly all big tech firms use its designs.”²¹ The article also refers to Arm as “a keystone in the \$500bn chip industry.”²² Lastly, the article provides detail about Arm’s value to third parties over the years, including SoftBank’s purchase of Arm for \$32 billion in 2016 and Nvidia’s offer to purchase Arm for \$40 billion in 2020.²³
- ii. In advance of Arm’s initial public offering (“IPO”) in September 2023, an article from *Fast Company* describes Arm as a “[h]igh-profile chip designer” with a “long-awaited” IPO.²⁴ Moreover, an article from *The Guardian* refers to Arm as a “dominant supplier” to

¹⁸ Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705, at -718.

¹⁹ Arm Holdings Limited, Form F-1 Registration Statement, April 28, 2023, Amended July 31, 2023, ARM_01259705, at -713.

²⁰ Arm’s 2014 total revenue of \$1.3 billion is unadjusted for inflation. See “ARM Holdings Plc Reports Results For The Fourth Quarter And Full Year 2015,” Arm, February 10, 2016, <https://newsroom.arm.com/news/arm-holdings-plc-reports-results-for-the-fourth-quarter-and-full-year-2015>.

²¹ “Why everyone wants Arm,” The Economist, June 22, 2022, <https://www.economist.com/business/2022/06/22/why-everyone-wants-arm>.

²² “Why everyone wants Arm,” The Economist, June 22, 2022, <https://www.economist.com/business/2022/06/22/why-everyone-wants-arm>.

²³ “Why everyone wants Arm,” The Economist, June 22, 2022, <https://www.economist.com/business/2022/06/22/why-everyone-wants-arm>.

²⁴ Sam Becker, “Arm IPO update: Filing reveals SoftBank’s target valuation as listing day approaches,” Fast Company, September 5, 2023, <https://www.fastcompany.com/90948568/arm-ipo-date-softbank-valuation-listing>.

chipmakers and indicates that Arm's IPO valued the company at \$54 billion.²⁵ Since Arm's \$54 billion IPO in September 2023, its stock price has more than doubled and reflects a \$133 billion valuation²⁶ as of March 18, 2024.²⁷

- iii. An August 2023 article from CNBC describes Arm as "one of the most important companies in technology" and "a bellwether for the chip industry."²⁸
- iv. A May 2022 article from *The Financial Times* highlights the "crucial role" that Arm plays in the global technology sector.²⁹ The article quotes Qualcomm's CEO—Cristiano Amon—describing Arm as "a very important asset and . . . an asset which is going to be essential to the development of our industry."³⁰ Mr. Amon also states that "[w]hen we look today, I think the trend is that everything is moving to Arm."³¹
- v. In a December 2021 complaint filed by the U.S. Federal Trade Commission ("FTC") in response to Nvidia's proposed acquisition of Arm, the FTC states that "Arm Processor Technology is at the foundation of many innovative products of our modern digital age, including nearly every smartphone on the market, advanced driver assistance features in recent and upcoming cars, web servers that can provide significantly better cost performance over the most comparable non-Arm servers, and many other examples. In these products, Arm Processor Technology is a critical input. The wide deployment of Arm's Processor Technology has fostered a vibrant ecosystem of software and hardware developers, software, and devices."³² Moreover, the FTC notes that "Arm achieved its

²⁵ Arm set an IPO price of \$51 per share, which valued the company at \$54 billion at the start of the trading day. However, over the course of the day, investor activity pushed the stock price up nearly 25%, and Arm ended the day with a valuation of over \$65 billion. See Dominic Rushe, "UK chip designer Arm soars on Nasdaq debut to notch \$65bn valuation," The Guardian, September 14, 2023, <https://www.theguardian.com/business/2023/sep/14/arm-ipo-share-sale-nasdaq-stock-market>.

²⁶ Based on Arm's market capitalization (i.e., stock price multiplied by the number of outstanding shares).

²⁷ "Arm Holdings plc (ARM)," Yahoo Finance, accessed March 18, 2024, <https://finance.yahoo.com/quote/ARM/>.

²⁸ Ryan Browne, "What Arm's expected debut means for the IPO market and SoftBank," CNBC, August 21, 2023, <https://www.cnbc.com/2023/08/21/arm-ipo-what-it-means-for-ipo-market-softbank.html>.

²⁹ Anna Gross and Tim Bradshaw, "Qualcomm wants to buy a stake in Arm alongside its rivals," *The Financial Times*, May 30, 2022, <https://www.ft.com/content/eab1d19d-ab4c-45b7-88b4-f1f5e115d16e>.

³⁰ Anna Gross and Tim Bradshaw, "Qualcomm wants to buy a stake in Arm alongside its rivals," *The Financial Times*, May 30, 2022, <https://www.ft.com/content/eab1d19d-ab4c-45b7-88b4-f1f5e115d16e>.

³¹ Anna Gross and Tim Bradshaw, "Qualcomm wants to buy a stake in Arm alongside its rivals," *The Financial Times*, May 30, 2022, <https://www.ft.com/content/eab1d19d-ab4c-45b7-88b4-f1f5e115d16e>.

³² Complaint, *In the Matter of Nvidia Corporation, SoftBank Group Corporation, and Arm, Ltd.*, Docket No. 9404, Federal Trade Commission, December 2, 2021, https://www.ftc.gov/system/files/documents/cases/d09404_part_3_complaint_public_version.pdf.

status as a foundational technology for so many innovative products because of its neutral licensing business model that fosters trust, collaboration, and engagement between Arm and its licensees.”³³

- vi. In addition to information about Arm’s renown presented in my Opening Report, Arm’s strong renown is evident from multiple media mentions, which refer to Arm as a “high-profile,” “dominant,” “keystone,” and “bellwether” company in the semiconductor chip industry. Moreover, media mentions highlight the overall value of Arm over the years as indicated by SoftBank’s purchase of Arm for \$32 billion in 2016, Nvidia’s offer to purchase Arm for \$40 billion in 2020, Arm’s \$54 billion IPO in September 2023, and Arm’s recent stock price surge and current valuation of around \$130 billion (based on market capitalization).³⁴

IV.B. Professor Steckel Presents No Evidence that Contradicts My Conclusions on the Strength of the Arm Trademarks and Brand

IV.B.1. Professor Steckel Does Not Dispute Relevant Facts About the Ownership and Protection of the Arm Trademarks and Fails to Recognize that Survey Evidence Is Not Required to Assess the Strength of a Trademark

8. Professor Steckel does not dispute that (i) Arm owns the Arm Trademarks and the iterations that it encompasses; (ii) Arm has Trademark Use Guidelines and Branding Guidelines that set parameters for use; and (iii) Arm ALAs contain provisions that set parameters for use by licensees (including Qualcomm).³⁵ Professor Steckel also does not provide any evidence of a third party using a similar mark in the semiconductor industry. Finally, Professor Steckel does not provide any evidence that contradicts my findings with regard to Arm’s history of owning

³³ Complaint, *In the Matter of Nvidia Corporation, SoftBank Group Corporation, and Arm, Ltd.*, Docket No. 9404, Federal Trade Commission, December 2, 2021, https://www.ftc.gov/system/files/documents/cases/d09404_part_3_complaint_public_version.pdf.

³⁴ Relatedly, Nvidia recently disclosed that it holds a \$147 million investment stake in Arm. See Nick Turner, “Nvidia tried and failed to buy Arm for \$40 billion in 2020, but it just reported a stake worth \$147.3 million,” Fortune, February 14, 2024, <https://fortune.com/2024/02/14/nvidia-reports-stake-in-arm-ai-semiconductor-chips/>.

³⁵ As set forth in my Opening Report,

Dhar Opening Report, ¶ 32. Arm’s TLAs

Dhar Opening Report, ¶¶ 33-34. In contrast, Arm’s ALAs

Dhar Report, ¶35.

the Arm Trademarks, sales success, and renown (e.g., reputation, fame, awards, and accolades), which I have further expanded upon in Section IV.A above. Indeed, Professor Steckel never states that Arm is not a strong brand.

9. Instead, Professor Steckel’s main dispute with my findings is that I have provided no evidence from a survey of customers in support of my conclusions regarding the strength of the Arm Trademarks.³⁶ However, as explained above, Professor Steckel fails to recognize that the determination of whether the Arm Trademarks or brand is strong does not require the expert to survey individual customers. Instead, my credentials and experience as a marketing expert allow me to reliably draw these conclusions based on established principles in the field of marketing science and consideration of marketplace factors. As I explain above in Section IV.A, Arm’s sales success and renown (e.g., reputation, fame, awards, and accolades) demonstrate that the Arm Trademarks and brand are commercially strong.
10. It is also important to recognize that—in addition to wrongly asserting that survey evidence is required to demonstrate the strength of a distinctive mark like Arm’s—Professor Steckel disregards this asserted requirement when making claims about the strength of Qualcomm’s brand. In particular, Professor Steckel states that “Qualcomm presumably has its own (arguably strong) brand reputation in the relevant marketplace,” but cites to no survey evidence to support this claim.³⁷ Therefore, while Professor Steckel criticizes my analysis of Arm’s brand strength for a “lack of customer-based evidence,”³⁸ this criticism is inconsistent with Professor Steckel’s own approach to opining about Qualcomm’s brand.

IV.B.2. Professor Steckel Misstates My Opinion on Ingredient Branding and His Comments on the Value of Arm Branding to End Customers Are Irrelevant to My Analysis

11. Professor Steckel misstates my opinion regarding ingredient branding. As an initial matter, I clearly explain in my Opening Report that Arm is a strong business-to-business (“B2B”) brand. Nevertheless, Professor Steckel claims that I imply that “Arm’s brand is an ingredient in the

³⁶ Steckel Rebuttal Report, Section IV.A.

³⁷ Steckel Rebuttal Report, ¶ 60.

³⁸ Steckel Rebuttal Report, ¶ 42.

overall success of end products among downstream consumers.” Beyond the fact that I do not make an assessment of Arm brand strength for end consumers, the awareness of Arm’s brand among end consumers when making a purchase is not relevant to my analysis. Moreover, since I do not opine on whether end consumers see the Arm brand (or even the Qualcomm brand for that matter) as a strong brand, the “Intel Inside” example—a specific type of ingredient brand strategy marketing an ingredient brand (i.e., microprocessors in computers) to end consumers—provided by Professor Steckel is not relevant to my analysis.

12. Qualcomm’s description of the Nuvia Products as “Arm-based” and/or “Arm-compliant” products takes advantage of Arm’s strong B2B brand in the industry since Qualcomm sells its products to other businesses. My opinion is supported by the academic literature that establishes that, through co-branding or composite branding, a company may be able to leverage the strong brand associated with a partner company’s ingredient product. Since I established that Arm is a strong B2B brand (i.e., in and of itself and not through any relationship with Qualcomm) in my Opening Report, Qualcomm’s exploitation of the Arm Trademarks to describe the Nuvia Products means that the strength of the Arm brand is being exploited. Further, given the sophisticated industry understanding of Arm requirements for testing and verification prior to the release of Arm-approved processors,³⁹ Qualcomm’s unauthorized use is likely to incorrectly communicate to others that Qualcomm’s Nuvia Products are connected to the Arm brand and/or have been verified and validated by Arm (which I understand is inaccurate). Therefore, Qualcomm benefits from the unauthorized use of the Arm Trademarks when selling unlicensed Nuvia Products to its business customers.

³⁹ Eoin McCann, *System Validation at Arm* (April 2016), <https://community.arm.com/arm-community-blogs/b/architectures-and-processors-blog/posts/system-validation-at-arm-enabling-our-partners-to-build-better-systems> (describing validation process). “The partner’s design is then certified by Arm as abiding by its guidelines, as upholding the Arm engineers’ security principles and original design intent, and perhaps most importantly, as being capable of running software produced for that processor’s design generation.” Scott Fulton III, *Arm processors: Everything you need to know now* (March 30, 2021), <https://www.zdnet.com/article/arm-processors-everything-you-need-to-know-now/>.

IV.B.3. Professor Steckel’s Opinion on the Strength of the Qualcomm Brand Is Irrelevant to My Analysis

13. Professor Steckel’s opinion on the strength of the Qualcomm brand is also irrelevant to my analysis. In particular, Professor Steckel states that “the Dhar Report fails to consider the extent to which Qualcomm’s brand plays a role in marketing Qualcomm’s Arm-based products to consumers.”⁴⁰ However, in my Opening Report, I concluded that (i) Arm is a strong brand and (ii) Qualcomm’s unlicensed use of the Arm Trademarks to describe the Nuvia Products is likely to cause customer confusion.⁴¹ Thus, the role and strength of Qualcomm’s brand and its brand associations are irrelevant to my analysis.

V. Professor Steckel Fails to Recognize that Qualcomm’s Unlicensed Use of the Terms “Arm,” “Arm-based,” and “Arm-compliant” Is Likely to Confuse Customers.

14. As I explained in my Opening Report, Qualcomm’s use of Arm’s Trademark in connection with the Nuvia Products—including such phrases as “Arm,” “Arm-based,” and “Arm-compliant”—is likely to falsely convey that such products have some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm.⁴² Arm’s Trademark Guidelines say as much directly: “Do not use Arm’s trademarks in any manner that expresses or implies that Arm has any affiliation, sponsorship, endorsement, certification, or approval of your product, service or company.”⁴³
15. The Steckel Rebuttal Report not only ignores entirely Qualcomm’s use of the term “Arm,” but also makes the unsupported (and incorrect) assertion that the use is permissible because modifier terms “Arm-based” and “Arm-Compliant” purportedly refer only to the technical attributes of a chip.⁴⁴

⁴⁰ Steckel Rebuttal Report, Section IV.C.

⁴¹ Dhar Opening Report, Section VIII.B (“Arm Has a Strong and Distinctive B2B Brand”) and Section VIII.D (“Qualcomm’s Unauthorized Use of the Arm Mark is Likely to Harm Arm”).

⁴² Dhar Opening Report, ¶¶122-133.

⁴³ Arm Trademark Use Guidelines, <https://www.arm.com/company/policies/trademarks/guidelines-trademarks>.

⁴⁴ See, e.g., Steckel Rebuttal Report, ¶¶ 27, 66, 77.

V.A. The Terms “Arm-based,” “Arm based,” and “Arm-Compliant” Communicate a False Connection to Arm’s Brand

V.A.1. The Terms “Arm-based” and “Arm based” Are Likely to Communicate a False Connection to Arm’s Brand

16. Mr. Jonathan Armstrong, Arm’s head of brand and creative services confirmed that “to be based on Arm” means “built on an Arm architecture or to have used an Arm core, such as a CPU or a GPU” in his deposition testimony.⁴⁵ As pointed out by Mr. Armstrong, Arm indeed uses the terms “Arm-based” and “Arm based” to describe its licensed products. For example,
 - a. An Arm press release from 2020 titled “Record Shipments of Arm-based Chips in Previous Quarter,” notes that “Arm partners have shipped more than 160 billion Arm-based chips.”⁴⁶
 - b. An Arm press release from 2021 titled “The Arm Ecosystem Ships a Record 6.7 Billion Arm-based Chips in a Single Quarter,” notes that the “growth in Arm-based intelligent embedded solutions has been staggering,” and that the company expects “to see increased adoption of Arm IP as we signed a record 175 licenses in 2020, many of those signed by first-time Arm partners.”⁴⁷
 - c. Similarly, a company press release from 2021 titled “Arm Partners are Shipping More Than 900 Arm-based Chips Per Second Based on Latest Results,” highlights that [REDACTED]
[REDACTED] and that [REDACTED]
[REDACTED]
[REDACTED],”⁴⁸

⁴⁵ 30(b)(6) Deposition of Jonathan Armstrong (Arm Ltd.), December 8, 2023, 82:20-83:1 (“[Q.] [REDACTED] [REDACTED]”).

⁴⁶ “Record Shipments of Arm-based Chips in Previous Quarter,” Arm Newsroom, February 25, 2020, <https://newsroom.arm.com/news/record-shipments-of-arm-based-chips-in-previous-quarter>.

⁴⁷ “The Arm Ecosystem Ships a Record 6.7 Billion Arm-based Chips in a Single Quarter,” Arm Newsroom, February 11, 2021, <https://newsroom.arm.com/news/the-arm-ecosystem-ships-a-record-6-7-billion-arm-based-chips-in-a-single-quarter>.

⁴⁸ “Arm Partners are Shipping More Than 900 Arm-based Chips Per Second Based on Latest Results,” Arm Newsroom, May 20, 2021, <https://newsroom.arm.com/news/arm-partners-are-shipping-more-than-900-arm-based-chips-per-second-based-on-latest-results>.

- d. An Arm news release from 2023 titled “Premium Arm-based Chromebooks Delivering World-class Performance” describes [REDACTED] “based on Arm technology” as “[REDACTED] .”⁴⁹
- e. Arm describes its CPU architecture as “the most pervasive processor architecture in the world, with more than 280 billion Arm-based chips shipped by our partners over the past three decades in products ranging from sensors, wearables and smartphones to supercomputers.”⁵⁰
- f. Arm describes numerous licensed commercial products as “based” on Arm technology:⁵¹
 - i. [REDACTED]
 - viii. [REDACTED]
- g. An Arm case study discusses [REDACTED], [REDACTED]
[REDACTED] across their [REDACTED],” such as the [REDACTED]
[REDACTED]

17. Furthermore, PCMag Encyclopedia’s definitions of similar phrases that also include the term “based” provide further evidence that the term “ARM-based” suggest a false connection to Arm’s brand:

⁴⁹ “Premium Arm-based Chromebooks Delivering World-class Performance,” Arm Newsroom, January 17, 2023, <https://newsroom.arm.com/premium-arm-based-chromebooks>.

⁵⁰ “CPU Architecture,” Arm, <https://www.arm.com/architecture/cpu>.

⁵¹ “Arm Designs,” Arm, <https://www.arm.com/company/success-library/arm-designs>.

⁵² “NXP Accelerates Software Creation on S32K Automotive Microcontrollers,” Arm Case Study, <https://armkeil.blob.core.windows.net/developer/Files/pdf/case-study/arm-nxp-case-study.pdf>

- a. “**Intel-based** system” is defined as “A computer that *uses a CPU from Intel*, such as a Core, Xeon, or Pentium chip. Also known as an ‘x86-based system.’ The x86 designation comes from the first PC, which used the Intel 8086 chip.”⁵³ (Emphasis added)
- b. “**PowerPC based**” is defined as “A computer that *uses PowerPC chips.*”⁵⁴ (Emphasis added) Similarly, “**PowerPC-based Mac**” is defined as “An earlier Mac computer that *used a PowerPC CPU chip.*”⁵⁵ (Emphasis added)
- c. “**RISC-based** system” is defined as “A computer system that *uses a RISC CPU* such as a SPARC, PowerPC or MIPS chip.”⁵⁶ (Emphasis added)
- d. “**CMOS based**” is defined as “An integrated circuit *fabricated using CMOS technology.*”⁵⁷ (Emphasis added)
- e. “**Windows based**” is defined as “(Windows-based; upper case “W”) Hardware and software that *runs a version of Microsoft Windows.*”⁵⁸ (Emphasis added)

V.A.2. The Term “Arm-Compliant” Is Likely to Indicate Compliance of Nuvia products with Arm Brand Standards and Specifications to Qualcomm’s Customers and Industry Participants

18. As I noted in my Opening Report, Qualcomm’s non-ALA-licensed use of the Arm Trademarks includes the use of the term [REDACTED].⁵⁹ The term [REDACTED] generally means “in agreement with a set of rules,”⁶⁰ or “conforming to requirements.”⁶¹ Further, given the sophisticated customers with a likely knowledge of Arm,

⁵³ “Intel-based system,” *PC Magazine*, <https://www.pc当地.com/encyclopedia/term/intel-based-system>; Jim Turley, “Introduction to Intel Architecture,” <https://www.intel.com/content/dam/www/public/us/en/documents/white-papers/ia-introduction-basics-paper.pdf>

⁵⁴ “PowerPC based,” *PC Magazine*, https://www.pc当地.com/encyclopedia/term/powerpc-based_.

⁵⁵ “PowerPC-based Mac,” *PC Magazine*, <https://www.pc当地.com/encyclopedia/term/powerpc-based-mac>.

⁵⁶ “RISC-based system,” *PC Magazine*, <https://www.pc当地.com/encyclopedia/term/risc-based-system>.

⁵⁷ “CMOS based,” *PC Magazine*, https://www.pc当地.com/encyclopedia/term/cmos-based_. “CMOS” is an acronym for Complementary Metal-Oxide-Semiconductor, a type of technology used in the manufacturing of processors, and other chips and digital devices. See, e.g., “What is CMOS,” Lenovo, <https://www.lenovo.com/us/en/glossary/cmos/>.

⁵⁸ “Windows based,” *PC Magazine*, <https://www.pc当地.com/encyclopedia/term/windows-based>.

⁵⁹ Dhar Opening Report, ¶ 77.

⁶⁰ “Compliant,” Oxford Learner’s Dictionaries, <https://www.oxfordlearnersdictionaries.com/us/definition/english/compliant?q=compliant>.

⁶¹ “Compliant,” Merriam-Webster Dictionary, <https://www.merriam-webster.com/dictionary/compliant>.

customers can be expected to perceive the meaning of compliant with Arm as a product that has been verified and validated by Arm.⁶²

19. Consistent with this general meaning, the PCMag Encyclopedia defines “compliance” as “conforming to a specification, standard or law that has been clearly defined.”⁶³ In this particular case, [REDACTED]
[REDACTED].⁶⁴

20. In fact, [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]

21. ARM’s Senior Vice President Paul Williamson echoed this [REDACTED]
[REDACTED] even more clearly in his testimony:

[REDACTED]
[REDACTED] 66

⁶² Eoin McCann, *System Validation at Arm* (April 2016), <https://community.arm.com/arm-community-blogs/b/architectures-and-processors-blog/posts/system-validation-at-arm-enabling-our-partners-to-build-better-systems>.

⁶³ “Compliance,” *PC Magazine*, <https://www.pc当地.com/encyclopedia/term/compliance>

⁶⁴ Arm engages in two primary types of licenses: a technology license agreement (“TLA”) and architectural license agreement (“ALA”) license. As described by Mr. Will Abbey, Arm’s VP of commercial operations for physical IP, a TLA [REDACTED]

By contrast, an ALA [REDACTED]

” Deposition of Will Abbey (Arm), October 27, 2023, 75:13-78:9. See also, Complaint, *Arm Ltd. v. Qualcomm Inc.*, C.A. No. 1:99-MC-0999, August 31, 2022, ¶¶ 17-19

⁶⁵ [REDACTED]

⁶⁶ Deposition of Paul Williamson (Arm), November 9, 2023, 209:18-21.

22. [REDACTED]

23. Under these licenses, [REDACTED] .⁶⁸ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. In addition to validation with Arm, manufacturers of Arm-compliant products are subject to specific branding guidelines. The guidelines expressly use the term “Arm Complaint Product” and govern the packaging, promotion, and technical documentation for the product.⁷⁰ Likewise, the Trademark Use Guidelines provide a list of “Don’ts” to third parties, which include: “Do not use inaccurate or misleading nouns after Arm’s trademarks. Arm’s trademarks are used for specific products and services.”⁷¹

⁶⁷ [REDACTED]

⁶⁸ “System Architecture Compliance Suites (ACS),” *Arm Developer*, <https://developer.arm.com/Architectures/Architectural%20Compliance%20Suite#Technical-Information>.

⁶⁹ [REDACTED]

⁷⁰ “Arm Branding Guidelines,” Arm, <https://www.arm.com/company/policies/trademarks/guidelines-brand>. [REDACTED]

⁷¹ Arm Trademark Use Guidelines, <https://www.arm.com/company/policies/trademarks/guidelines-trademarks>.

25. In sum, the term “Arm-compliant” is likely to communicate to industry participants—including both Arm’s and Qualcomm’s customers⁷²—that a product conforms to Arm specifications and has been validated by Arm. This meaning for the term “Arm compliant” is corroborated by statements and testimony from both Qualcomm and Arm staff, Arm licensing agreements, and Arm’s specific technical validation processes. Moreover, it is not possible for an unlicensed entity to be Arm-compliant because it would not have gone through the specific Arm validation and compliance process afforded only to licensees. Professor Steckel fails to consider any of this support in his own analysis of this issue, and his assertions to the contrary are unsupported.

V.B. Contrary to the Assertions of Professor Steckel, Qualcomm’s Communication About and Description of the Snapdragon X Elite Processor as “Arm,” “Arm-Based,” and/or “Arm-Compliant” Is Likely to Confuse Customers

26. As I explain in my Opening Report and above, Qualcomm’s use of the terms “Arm-based” and “Arm-compliant” is likely to mislead other relevant industry participants into believing that there is a false connection with Arm’s brand, and/or a product is licensed, verified, or validated by Arm. Even so, after acquiring Nuvia in 2021, Qualcomm’s top management officers described Nuvia’s *non-ALA-licensed* upcoming product (Snapdragon X Elite) as “Arm,” “Arm-based,” and “Arm-Compliant” in numerous public statements.⁷³
27. For example, Qualcomm executives and employees continued to make similar statements about the Nuvia Products, up to, during, and after the announcement of the [REDACTED]. These

⁷² Some of ARM’s customers are also Qualcomm’s sophisticated customers. For example, both Arm and Qualcomm count Microsoft as a customer. See Arm Holdings plc, Amendment No. 2 to Form F-1, September 5, 2023, <https://www.sec.gov/Archives/edgar/data/1973239/000119312523228059/d393891dfa.htm>, (“Arm Total Access customers include Amazon AWS, Infineon Technologies AG, Marvell Technology, Inc., Microsoft, NXP Semiconductors N.V., Realtek Semiconductor Corp, STMicroelectronics N.V. and others.”); see also, “Qualcomm and Microsoft Align Efforts to Scale On-Device AI at Build,” *Qualcomm*, May 23, 2023, <https://www.qualcomm.com/news/releases/2023/05/qualcomm-and-microsoft-align-efforts-to-scale-on-device-ai-at-bu>.

⁷³ A number of these public statements are strategic pre-announcement communications. Academic studies show that firms use such strategic “preannouncement” communications to inform investors, B2B partners, and other market participants about what to expect in their upcoming product pipelines. See, e.g., Kim Schatzel and Roger Calantone, “Creating Market Anticipation: An Exploratory Examination of the Effect of Preannouncement Behavior on a New Product’s Launch,” *Journal of the Academy of Marketing Science* 34(3) (2006): 357-366, at 357 (Finding that preannouncement communication “emphasizes the use of preannouncements as business-to-business marketing communications aimed at influencing current and prospective supply chain partners in the firm’s favor.”), and Chien-Wei Chen and Veronica Wong, “Design and Delivery of New Product Preannouncement Messages,” *Journal of Marketing Theory and Practice* 20(2) (2012): 203-221, at 203 (“The preannouncements can facilitate or accelerate the initial rate of customer adoption through evoking curiosity and interest.”).

Qualcomm top management included: Qualcomm President and CEO, Mr. Cristiano Amon; CFO, Mr. Akash Palkhiwala; VP of Product Marketing, Mr. Michael Roberts; Director of Product Management, CPU Technology, Manju Varma; and Senior VP and General Manager, Compute and Gaming, Keder Kondap.

28. The following excerpts illustrate that these remarks often described the Nuvia Products and

- [REDACTED]
- a. April 2021, Mr. Amon: “The NUVIA asset give[s] us a lot of flexibility. You should think about it as having a scalable leading CPU asset to get together with the other Qualcomm assets. [. . .] And **some of the transition across the board to ARM architecture really create a big expansion opportunity for Qualcomm, and we’re very focused to make that happen with a leading position leveraging the NUVIA CPU.**”⁷⁴ (Emphasis added).
 - b. May 2021, Mr. Amon: “**With the NUVIA acquisition, we believe we can build the leading ARM CPU.** The ecosystem is already moving to ARM. We feel pretty good about our partnership with Microsoft, and we see that as definitely a growth opportunity in the horizon for Qualcomm.”⁷⁵ (Emphasis added).
 - c. August 2021, Mr. Palkhiwala: “As you’re well aware, Joe, we just -- ***we bought this company called NUVIA, which does very high-performance, low-power, ARM-based CPU cores.*** And we’re very excited about bringing that technology over to the PC industry and becoming the alternative for the PC ecosystem to compete with the Apple M1 processor.”⁷⁶
 - d. November 2021, Mr. Amon: “We are pleased with the strong market validation of ***ARM-based personal computing*** in the industry transition to a new SoC architecture. We’re more confident than ever in the connected computing opportunity, ***our upcoming solutions powered by our NUVIA CPUs*** and our collaboration with Microsoft.”⁷⁷ (Emphasis added).

⁷⁴ Qualcomm Inc. Q2 2021 Earnings Call, April 28, 2021, transcript published by S&P Global Market Intelligence, pp. 12-13.

⁷⁵ Qualcomm Inc. presentation at J.P. Morgan’s 49th Annual Global Technology Conference, May 26, 2021, transcript published by S&P Global Market Intelligence, pp. 8-9.

⁷⁶ Qualcomm Inc. presentation at Nasdaq Virtual Investor Conference in Asia, August 10, 2021, transcript published by S&P Global Market Intelligence, p. 11.

⁷⁷ Qualcomm Inc. Q4 2021 Earnings Call, November 3, 2021, transcript published by S&P Global Market Intelligence, p. 4.

- e. February 2022, Mr. Amon: “[O]ur early investments, collaboration with Microsoft and the **recent acquisition of NUVIA uniquely positions us to drive the PC industry transition to ARM-based computing** for next-generation connected laptops.”⁷⁸ (Emphasis added).
- f. April 2022, Mr. Amon: “We’re encouraged by the broad interest in our upcoming products, utilizing our industry-leading **CPU**s designed by our **NUVIA team**. We continue to drive the **inevitable transition to ARM-based computing** while redefining the future of mobile productivity.”⁷⁹ (Emphasis added).
- g. May 2022, Mr. Palkhiwala: “We wanted to develop **our own custom ARM CPU**, so we acquired this company called NUVIA. And they’re extremely well -- doing extremely well. They’re fit right into our road map.”⁸⁰ (Emphasis added).
- h. June 2022, Mr. Amon: “[Nuvia] was the team that design[ed], I think that breakthrough **ARM processor and performance**. And we’re going to take it to first PC, then auto and then mobile.”⁸¹ (Emphasis added).
- i. May 2023, Mr. Palkhiwala: “[Analyst Question]: And it sounds like from the way you’ve been talking about it, you’re exactly sort of trying to hit this [PC] market, sort of this target opportunity with this NUVIA chip. Is that fair to say? [Mr. Palkhiwala]: That’s right. So **it is a chip that has a custom arm CPU designed by the NUVIA team.**”⁸² (Emphasis added).
- j. August 2023, Mr. Palkhiwala: (“[Analyst question]: So talk a little bit about NUVIA and how it fits into this whole? [Mr. Palkhiwala] **We’ve used that team and our architecture license with ARM to develop highly power-efficient cores** for EDGE device [. . .] And we’re

⁷⁸ Qualcomm Inc. Q1 2022 Earnings Call, February 2, 2022, transcript published by S&P Global Market Intelligence, p. 4.

⁷⁹ Qualcomm Inc. Q2 2022 Earnings Call, April 27, 2022, transcript published by S&P Global Market Intelligence, p. 5.

⁸⁰ Qualcomm Inc. presentation at J.P. Morgan’s 50th Annual Global Technology Conference, May 23, 2022, transcript published by S&P Global Market Intelligence, p. 8.

⁸¹ Qualcomm Inc. presentation at Bernstein 38th Annual Strategic Decisions Conference, June 1, 2022, transcript published by S&P Global Market Intelligence, p. 17.

⁸² Qualcomm Inc. presentation at 51st Annual J.P. Morgan Global Technology, Media and Communications Conference, May 22, 2023, transcript published by S&P Global Market Intelligence, p. 10.

very confident that *we'll have CPU cores that are aligned with ARM architecture*, but really have a performance advantage versus our competition.”⁸³ (Emphasis added).

- k. October 25, 2023, Mrs. Varma: [REDACTED]
[REDACTED] .”⁸⁴ (Emphasis added).
- l. October 25, 2023, Mr. Kondap: [REDACTED]
[REDACTED]⁸⁵.
- m. October 25, 2023, CEO of Qualcomm Partner HONOR, George Zhao, at the Snapdragon Compute Spotlight event: Announcing HONOR will “join the [REDACTED]
[REDACTED]⁸⁶ (Emphasis added).
- n. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- o. November 2023, Mr. Palkhiwala: “[T]he chip that we announced about a month ago [the Snapdragon X Elite announced in October] is really a very modern architecture, bringing the strength of our phone platform to PCs. [REDACTED]
[REDACTED] (Emphasis added).

⁸³ Qualcomm Inc. presentation at Deutsche Bank 2023 Technology Conference, August 31, 2023, transcript published by S&P Global Market Intelligence, p. 8.

⁸⁴ Manju Varma, “Snapdragon Compute Spotlight: Day 2 Livestream,” at 36:40, YouTube, uploaded by Snapdragon October 25, 2023, <https://www.youtube.com/live/dJcSaEbzQN0?si=bdIjMBVJvvabq4x5&t=2246>.

⁸⁵ Kedar Kondap, “At the intersection of intelligence and imagination: Rethink what’s possible with Snapdragon X Elite,” Qualcomm, October 25, 2023, <https://www.qualcomm.com/news/onq/2023/10/rethink-whats-possible-with-new-snapdragon-x-elite-platform>.

⁸⁶ George Zhao, “Snapdragon Compute Spotlight: Day 2 Livestream,” at 28:42, YouTube, uploaded by Snapdragon October 25, 2023, <https://www.youtube.com/live/dJcSaEbzQN0?si=2r7Kb9iyuZz3KqOH>.

⁸⁷ [REDACTED]

⁸⁸ Qualcomm Inc. presentation at 2023 UBS Global Technology Conference, November 28, 2023, transcript published by S&P Global Market Intelligence, p. 7.

V.C. Media Coverage of Qualcomm's Unlicensed Use of the Arm Brand and Trademarks Linked to Its Nuvia Products Both Demonstrates and Amplifies the Likelihood of Confusion

29. As I explained in my Opening Report, numerous third-party sources are using Arm's Trademarks to describe the Nuvia Products, and this use of the Arm Trademarks demonstrates that "... participants throughout the relevant industry are associating the Nuvia Products with Arm sponsorship and falsely assuming a licensing relationship exists between Arm and Qualcomm regarding the Nuvia Products."⁸⁹ Moreover, this use of the Arm Trademarks also amplifies "the confusion created by Qualcomm's own use by suggesting Arm sponsorship and endorsement of the Nuvia Products to an even broader audience."⁹⁰
30. While Section V.A above adds to my Opening Report's examples of Qualcomm's misleading statements regarding the Snapdragon X Elite, this section adds to my Opening Report's examples of well-known trade publications that reflect Qualcomm's misstatements and identifies similar statements in analyst reports. The examples contained in these sources provide further support for my finding that Qualcomm's misstatements are likely to confuse customers by falsely suggesting connection to the Arm brand.⁹¹ In contrast, Professor Steckel provides no support for his assertion that customers are unlikely to be confused by Qualcomm's misleading statements.⁹²

⁸⁹ Dhar Opening Report, ¶120.

⁹⁰ Dhar Opening Report, ¶ 120. Section V. above provides additional examples of Qualcomm's misleading statements about the Snapdragon X Elite product.

⁹¹ I believe that the third-party press provides a good indication of how a sophisticated purchaser would interpret Qualcomm's misleading use of the terms "Arm-based" and "Arm-compliant" in its press releases. It was not feasible to survey B2B customers to assess their actual confusion because the product had not yet launched as of the filing date of my Opening Report, and no PCs powered by Snapdragon X Elite are expected to be released until mid-2024. "Qualcomm Unleashes Snapdragon X Elite: The AI Super-Charged Platform to Revolutionize the PC," Qualcomm, October 24, 2023, <https://www.qualcomm.com/news/releases/2023/10/qualcomm-unleashes-snapdragon-x-elite--the-ai-super-charged-plat>. ("PCs powered by Snapdragon X Elite are expected from leading OEMs starting mid-2024").

I note that Professor Steckel also has not conducted any customer surveys to indicate that his interpretations of these terms are correct and that mine are not.

⁹² Steckel Rebuttal Report, ¶ 63. In addition to providing support for my finding that Qualcomm's misstatements are likely to confuse customers, these additional examples of media confusion provide further support for my finding that the confusion likely created by Qualcomm's own misuse of Arm's Trademarks is amplified by erroneous media coverage.

V.C.1. The Third-Party Press Provides Numerous Examples Presenting the Snapdragon X Elite Processor as “Arm,” “Arm-Based,” and/or “Arm-Compliant.”

31. To identify additional examples of how the third-party press has referred to the Snapdragon X Elite, I used Dow Jones’ Factiva database.⁹³ I searched the database for “All Sources,” between October 24, 2023, and March 18, 2024, and reviewed the following:
 - a. all articles that include the term “Snapdragon X Elite” and either the term “Arm” or “Arm-based” either in the headline or the article body;
 - b. all articles that include the term “Snapdragon X Elite” in the headline, and either the term “Arm” or “Arm-based” in the headline or article body.
32. My analysis of this database indicates the following:⁹⁴
 - a. Out of 501 articles in the Factiva database that include the term “Snapdragon X Elite” 50% also include the term “Arm” (251), and 26% also include the term “Arm-based” (132).⁹⁵
 - b. Out of 95 articles in the Factiva database that include the term “Snapdragon X Elite” *in the article headline*, 58% also include the term “Arm” (55) *in the article body*, and 37% also include the term “Arm-based” (35) *in the article body*.⁹⁶
33. As discussed in aggregate above, articles and publications in the media reporting on Qualcomm’s Nuvia Products and Snapdragon X Elite have presented the product as Arm-based and/or Arm-compliant. These results highlight the significant connection of Qualcomm’s Snapdragon X

⁹³ Factiva is a business intelligence database that includes content from 33,000 sources, including newspapers, magazines, journals, websites, blogs, and market research publications. See “What is Factiva?” *Dow Jones Factiva*, <https://www.dowjones.com/professional/glossary/factiva/>.

⁹⁴ Factiva, Dow Jones & Company, <https://factiva.com>.

⁹⁵ For example, Matthew S. Smith, “Grown-up Arm Chips Look to Dethrone x86 in Laptops,” *IEEE Spectrum*, November 9, 2023, via Factiva on March 18, 2024 (“Qualcomm announced the Snapdragon X Elite, a system-on-a-chip (SoC) with a custom Arm architecture designed specifically for laptop PCs.”), and Subhrojit Mallick, “Apple Launches New M3 Chips for Mac Laptops, Desktops. What Does This Mean for Users in India?” *The Economic Times*, October 31, 2023, via Factiva on March 18, 2024 (“Qualcomm unveiled the Snapdragon X Elite, an ARM-based chip designed for Windows laptops”).

⁹⁶ For example, “Qualcomm’s Snapdragon X Elite Chips Promise Major PC Performance,” *PCWorld*, October 24, 2023, via Factiva on March 18, 2024 (“[A]fter buying chip designer Nuvia in 2021, Qualcomm is trying again, hoping that its superpowered Arm chips can once again make Windows on Arm PCs a competitor to conventional X86 PCs when they launch in mid-2024.”), and Harry McCracken, “Qualcomm’s Snapdragon X Elite Chip is a Big Bet on the PC’s Future,” *Fast Company*, October 24, 2023, via Factiva, March 18, 2024 (“Qualcomm—like Apple, Nvidia, Samsung, and others—licenses some of its core technology from Arm, then designs chips on top of it.”).

Elite processor with the Arm Trademarks and brand broadly exhibited by third-party media and press.

34. This is specifically demonstrated by the following examples:

- a. *Qualcomm's Nuvia ARM chips to challenge Apple M-series won't arrive until late 2023*, Windows Central, April 29, 2022: “Qualcomm’s Nuvia ARM CPUs will not ship in devices until late 2023.”⁹⁷
- b. *Qualcomm Promises to Outplay Apple’s M2 With Its Upcoming Arm Chips*, Tom’s Hardware, June 9, 2022: “Qualcomm’s goal is nothing short of claiming performance leadership in the personal computing CPU space with its Nuvia-powered Arm chips.”⁹⁸
- c. *Apple Thunders Ahead With 90% Arm Notebook Market Share*, WCCFtech, June 18, 2022: “Despite its low share, Qualcomm continues to invest in notebook PC processors with its Nuvia CPU cores. We believe that Arm-based notebook PC processor offers an attractive opportunity to Qualcomm.”⁹⁹
- d. *Qualcomm: Next Generation Nuvia-Based Snapdragon Allegedly Has Design Wins*, Tom’s Hardware, November 4, 2022: “Furthermore, this shows their assurance of performance and competitive advantages that such computers may provide, which is a good sign both for Qualcomm and other designers of Arm-powered SoCs.”¹⁰⁰
- e. *Qualcomm’s Computer CPU Could Hit the Markets as Early As 2024: Report*, Digit, November 8, 2022:¹⁰¹ “Qualcomm desktop CPU will use Nuvia’s Phoenix core design, developed by engineers who have worked with Apple in developing its ARM-based chipset.

⁹⁷ Sean Endicott, “Qualcomm’s Nuvia ARM chips to challenge Apple M-series won’t arrive until late 2023,” *Windows Central*, April 29, 2022, <https://www.windowscentral.com/qualcomms-nuvia-arm-chips-wont-arrive-until-late-2023>.

⁹⁸ Francisco Pires, “Qualcomm Promises to Outplay Apple’s M2 With Its Upcoming Arm Chips,” *Tom’s Hardware*, June 9, 2022, <https://www.tomshardware.com/news/qualcomm-promises-to-outplay-apples-m2-with-its-upcoming-arm-chips>.

⁹⁹ Ramish Zafar, “Apple Thunders Ahead With 90% Arm Notebook Market Share,” *WCCFtech*, June 18, 2022, <https://wccftech.com/apple-thunders-ahead-with-90-arm-notebook-market-share/>.

¹⁰⁰ Anton Shilov, “Qualcomm: Next Generation Nuvia-Based Snapdragon Allegedly Has Design Wins,” *Tom’s Hardware*, November 4, 2022, <https://www.tomshardware.com/news/qualcomm-nuvia-based-snapdragon-due-in-2024-increases-design-wins>.

¹⁰¹ Shikhar Mehrotra, “Qualcomm’s computer CPU could hit the markets as early as 2024: Report,” *Digit*, November 8, 2022, <https://www.digit.in/news/general/qualcomm-computer-cpu-could-hit-the-markets-as-early-as-2024-report-65953.html>.

[. . .] The Qualcomm 12-core chipset is expected to offer high performance. If that happens, it would be the first-time users can use ARM-based Windows computers based on Qualcomm's chipset.”

- f. *Qualcomm's ARM-based 12-core Desktop CPU to be Unveiled in 2024: Report*, Business Standard, November 9, 2022: “The Phoenix core architecture from Nuvia, created by former Apple employees who worked on the company’s existing ARM-based Apple CPUs, is reportedly what Qualcomm would adopt. [. . .] Either way, the report suggests that the performance is ‘extremely promising’ so might finally be a proper ARM-based Windows experience in the next couple of years, as per GSM Arena.”¹⁰²
- g. *Qualcomm names new CPUs Oryon, plans launch in 2023*, Telecompaper World, November 17, 2022: “The new name is expected to lead a further push into the Arm-based computing market, following the takeover of Nuvia in 2021.”¹⁰³
- h. *Qualcomm goes beyond the smartphone, shows off new hardware*, Techspot, November 18, 2022: “Qualcomm also announced the name—though no technical details—of its next-generation Arm-based CPU that they’re going to call Oryon and hope to ship in 2023.”¹⁰⁴
- i. *Qualcomm testing its answer to Apple’s M-series chips*, Times of India, December 30, 2022: “Qualcomm has been desperate to bring an ARM-based chip for Windows PCs to compete with Apple’s M-series chips. Earlier this year, the chipmaker announced a new brand, ‘Oryon,’ a lineup of new CPUs meant for more powerful devices, made by Nuvia, a team of ex-Apple chip designers Qualcomm acquired last year, who happened to work on the M-series chip.”¹⁰⁵

¹⁰² “Qualcomm’s ARM-based 12-core desktop CPU to be unveiled in 2024: Report,” *Business Standard*, November 9, 2022, https://www.business-standard.com/article/technology/qualcomm-s-arm-based-12-core-desktop-cpu-to-be-unveiled-in-2024-report-122110900025_1.html.

¹⁰³ “Qualcomm names new CPUs Oryon, Plans Launch in 2023,” *Telecompaper World*, November 17, 2022, <https://www.telecompaper.com/news/qualcomm-names-new-cpus-oryon-plans-launch-in-2023--1444584>.

¹⁰⁴ Bob O’Donnell, “Qualcomm goes beyond the smartphone, shows off new hardware,” *Techspot*, November 18, 2022, <https://www.techspot.com/news/96696-qualcomm-goes-beyond-smartphone-shows-off-new-hardware.html>.

¹⁰⁵ “Qualcomm testing its answer to Apple’s M-series chips,” *Times of India*, December 30, 2022, <https://timesofindia.indiatimes.com/gadgets-news/qualcomm-testing-its-answer-to-apples-m-series-chips/articleshow/96621492.cms>.

- j. *Qualcomm developing its own ARM-based chips to rival Apple's M-series processors:* Report, Financial Express Online, December 31, 2022: "An ARM-based chip for Windows PCs has been aimed by Qualcomm to compete with Apple's M-series chips. The chipmaker announced a new brand earlier this year called 'Oryon'."¹⁰⁶
- k. *Qualcomm's next round of PC chips will fight Apple under the name Snapdragon X,* The Verge, October 10, 2023: "Qualcomm says it has a new name for the next generation of its ARM PC platform: Snapdragon X. The platform is based on the Oryon CPU tech from its 2021 acquisition of Nuvia"¹⁰⁷
- l. *Qualcomm to Take on Apple Silicon Chips with Snapdragon X Series for PCs,* Mac Rumors, October 10, 2023: "Snapdragon X chips will use the Qualcomm Oryon CPU, which is built on the chip technology that it got when it purchased Nuvia. Founded by ex-Apple chip designers, Nuvia designed custom Arm-based chips that are expected to bring Apple silicon-like performance to PCs with improved power and efficiency."¹⁰⁸
- m. *Qualcomm Snapdragon X: Is 2024 finally the year for Arm-powered PCs?,* Laptop Magazine, October 12, 2023: "Ahead of Qualcomm's annual Snapdragon Summit, the company just announced details about its new Arm processors for PCs titled Snapdragon X. According to Qualcomm (via Ars Technica), Snapdragon X will include a new CPU architecture called Oryon, GPU cores, and an NPU that takes advantage of generative AI."¹⁰⁹
- n. *Meet Snapdragon X Elite: Qualcomm Touts Big AI, Compute Gains on Arm Laptop CPUs,* PC World, October 24, 2023: "The broader 'Snapdragon X' is the follow-on to the company's Snapdragon 8cx, an Arm-based CPU line. . . Oryon (pronounced like 'Orion,' the

¹⁰⁶ Ishita Banerjee, "Qualcomm developing its own ARM-based chips to rival Apple's M-series processors: Report," *Financial Express Online*, December 31, 2022, <https://www.financialexpress.com/life/technology-qualcomm-developing-its-own-arm-based-chips-to-rival-apples-m-series-processors-report-2932738/>.

¹⁰⁷ Wes Davis, "Qualcomm's next round of PC chips will fight Apple under the name Snapdragon X," *The Verge*, October 10, 2023, <https://www.theverge.com/2023/10/10/23911431/qualcomm-snapdragon-x-platform-oryon-cpu-windows-pc-apple-silicon>.

¹⁰⁸ Juli Clover, "Qualcomm to Take on Apple Silicon Chips With Snapdragon X Series for PCs," *Mac Rumors*, October 10, 2023, <https://www.macrumors.com/2023/10/10/qualcomm-snapdragon-x/>.

¹⁰⁹ Sarah Chaney, "Qualcomm Snapdragon X: Is 2024 finally the year for Arm-powered PCs?" *Laptop Magazine*, October 12, 2023, <https://www.laptopmag.com/laptops/qualcomm-snapdragon-x-is-2024-finally-the-year-for-arm-powered-pcs>.

star system) in its initial offering is a 12-core Arm CPU core, custom-designed by Qualcomm.”¹¹⁰

- o. *Qualcomm’s Snapdragon X Elite Chips Promise Major PC Performance*, PC World, October 24, 2023: “But after buying chip designer Nuvia in 2021, Qualcomm is trying again, hoping that its superpowered Arm chips can once again make Windows on Arm PCs a competitor to conventional X86 PCs when they launch in mid-2024.”¹¹¹
- p. *New Qualcomm Snapdragon X Elite Has a Real Shot at The Laptop x86 Market*, Forbes, October 24, 2023: “And laptops are just the beginning of the road for the new Oryon CPU, which will become the primary Qualcomm Arm CPU for all devices”.¹¹²
- q. *The Snapdragon X Elite is Qualcomm’s most powerful chip to date*, Engadget, October 24, 2023: “The Arm-based Snapdragon X Elite is the successor to last year’s Snapdragon 8cx Gen 3 line of laptop chips, which recently got a name change to reflect the huge leap in performance for this upcoming generation. Powered by 12 Oryon cores....”¹¹³
- r. *Intel’s Turnaround Was Just Dealt a Devastating Blow*, The Motley Fool, October 26, 2023: “Qualcomm just released its new Arm PC chip Tuesday [. . .] Qualcomm looks to give everyone a run for their money, based on the specs for its new Snapdragon X Elite processor for Windows laptops, which it unveiled on Tuesday. These new chips should be available in Windows laptops sometime in 2024. The new system-on-chip processor contains Qualcomm’s Oryon central processing unit, an Adreno graphics processor, a Hexagon neural (AI) processor, RAM memory, and other circuitry that makes PCs run.”¹¹⁴

¹¹⁰ John Burek, “Meet Snapdragon X Elite: Qualcomm Touts Big AI, Compute Gains on Arm Laptop CPUs,” *PC World*, October 24, 2023, <https://www.pcworld.com/news/qualcomm-snapdragon-x-elite-oryon-unveiled>.

¹¹¹ Mark Hachman, “Qualcomm’s Snapdragon X Elite chips promise major PC performance,” *PC World*, October 24, 2023, <https://www.pcworld.com/article/2112907/qualcomm-snapdragon-x-elite-chips-promise-major-pc-performance.html>.

¹¹² Karl Freund, “New Qualcomm Snapdragon X Elite Has A Real Shot At The Laptop x86 Market,” *Forbes*, October 24, 2023, <https://www.forbes.com/sites/karlfreund/2023/10/24/new-qualcomm-snapdragon-x-elite-has-a-real-shot-at-the-laptop-x86-market/?sh=10430351526f>.

¹¹³ Sam Rutherford, “The Snapdragon X Elite is Qualcomm’s most powerful chip to date,” *Engadget*, October 24, 2023, <https://www.engadget.com/the-snapdragon-x-elite-is-qualcomms-most-powerful-chip-to-date-190004830.html>.

¹¹⁴ Billy Duberstein, “Intel’s Turnaround Was Just Dealt a Devastating Blow,” *The Motley Fool*, October 26, 2023, <https://www.fool.com/investing/2023/10/26/intels-turnaround-was-just-dealt-a-devastating-blo/>.

- s. *Qualcomm Snapdragon X Elite Performance Preview: A First Look at What's to Come*, AnandTech, October 30, 2023: “Backed by Qualcomm's custom Arm CPU core, Oryon, the company is aiming to make the Snapdragon X Elite a watershed moment for the Snapdragon brand, both carving out a piece of the lucrative Windows laptop market. . . .”¹¹⁵
- t. *First Snapdragon X Elite benchmarks: Impressive gains over M2 Max, Ryzen 9 7940HS, Intel 13th gen-H, and 14th gen desktop CPUs*, NotebookCheck, October 30, 2023: “The X Elite uses ARM's 8.7 instruction set and its Adreno GPU offers full DirectX and OpenGL support, according to Qualcomm. [. . .] Overall, we see that the Snapdragon X Elite has excellent potential—one that the Windows on ARM platform has been sorely longing for all these years.”¹¹⁶
- u. *Qualcomm Snapdragon X Elite Unveiled: ARM-based SoC for Windows-powered AI PCs*, Counterpoint Research, November 2, 2023: “Based on its brand-new ARM CPU core ‘Oryon’, developed from its Nuvia acquisition, Qualcomm's Snapdragon X Elite SoC is built on TSMC's 4nm process node. The CPU uses ARM's 8.7 instruction set and features 12 high-performance ‘Oryon’ cores clocked at 3.8GHz.”¹¹⁷ (Emphasis in original).
- v. *Chip wars are coming to PCs*, Financial Times, November 3, 2023: “Last week, mobile chipmaker Qualcomm unveiled an Arm-based PC chip of its own. It is the first chip based on designs from Nuvia, a start-up founded by some of Apple's top chip engineers that Qualcomm acquired two years ago, and a sign that a real technology race is breaking out in PC chips.”¹¹⁸
- w. *Results are in: Qualcomm's Snapdragon X Elite goes toe-to-toe with Apple's new M3 Pro processor*, Windows Central, November 7, 2023: “Using Geekbench 6, which is a

¹¹⁵ Ryan Smith, “Qualcomm Snapdragon X Elite Performance Preview: A First Look at What's to Come,” *AnandTech*, October 30, 2023, <https://www.anandtech.com/show/21112/qualcomm-snapdragon-x-elite-performance-preview-a-first-look-at-whats-to-come>.

¹¹⁶ Vaidyanathan Subramaniam and Alexander Fagot, “First Snapdragon X Elite benchmarks: Impressive gains over M2 Max, Ryzen 9 7940HS, Intel 13th gen-H, and 14th gen desktop CPUs,” *NotebookCheck*, October 30, 2023, <https://www.notebookcheck.net/First-Snapdragon-X-Elite-benchmarks-Impressive-gains-over-M2-Max-Ryzen-9-7940HS-Intel-13th-gen-H-and-14th-gen-desktop-CPUs.763149.0.html>.

¹¹⁷ “Qualcomm Snapdragon X Elite Unveiled: ARM-based SoC for Windows-powered AI PCs,” *Counterpoint Research*, November 2, 2023, <https://www.counterpointresearch.com/insights/qualcomm-snapdragon-x-elite-arm-based-soc-windows-ai-pc/>.

¹¹⁸ Richard Waters, “Chip wars are coming to PCs,” *Financial Times*, November 3, 2023, <https://www.ft.com/content/c9731eb8-7213-4f51-bfa3-1c15b4581fc0>.

platform-neutral benchmarking app that can handle both x86 processors like Intel and AMD and ARM-based ones like Apple's M-series and Qualcomm Snapdragon, is one of the go-to benchmarks for laptops, desktop PCs, tablets, and even smartphones. [...] Pulling results from Geekbench leaderboards, we can understand how Apple's finalized M3 chips compare to Qualcomm's, which are still being optimized [...] You must give Qualcomm some credit here. The company is coming out with its first-gen Oryon processor, and not only does it do well against the M2 series, but it also competes very well against the new M3 and M3 Pro.”¹¹⁹

- x. *Grown-up Arm Chips Look to Dethrone x86 in Laptops: Qualcomm's Snapdragon X and Apple M3 show Arm architecture gaining ground*, IEEE Spectrum, November 11, 2023: “At the company's October 2023 Snapdragon Summit, Qualcomm announced the Snapdragon X Elite, a system-on-a-chip (SoC) with a custom Arm architecture”¹²⁰
 - y. *Qualcomm Will Try to Have Its Apple Silicon Moment in PCs with “Snapdragon X”*, Ars Technica, November 11, 2023: “We should learn more about Qualcomm's high-end Arm chip later this month [...] The company hasn't shared many specifics yet, but yesterday we finally got a name: ‘Snapdragon X,’ which is coming in 2024, and it may finally do for Arm-powered Windows PCs what Apple Silicon chips did for Macs a few years ago”¹²¹
 - z. *Qualcomm claims Snapdragon X Elite Arm SoC is faster than Apple's M3*, Techspot, December 18, 2023: “Qualcomm recently announced the Snapdragon X Elite system-on-chip (SoC) device as a new laptop-class Arm processor”.¹²²
- aa. *2024 could be the year the PC finally dumps x86 for Arm, all thanks to Windows 12 and Qualcomm's new chip*, PC Gamer, December 24, 2023: “We've already reported on

¹¹⁹ Daniel Rubino, “Results are in: Qualcomm's Snapdragon X Elite goes toe-to-toe with Apple's new M3 Pro processor,” *Windows Central*, November 7, 2023, <https://www.windowscentral.com/hardware/laptops/results-are-in-qualcomms-snapdragon-x-elite-goes-toe-to-toe-with-apples-new-m3-pro-processor>.

¹²⁰ Matthew S. Smith, “Grown-up Arm Chips Look to Dethrone x86 in Laptops: Qualcomm's Snapdragon X and Apple M3 show Arm architecture gaining ground,” *IEEE Spectrum*, November 09, 2023, <https://spectrum.ieee.org/qualcomm-snapdragon>.

¹²¹ Andrew Cunningham, “Qualcomm will try to have its Apple Silicon moment in PCs with ‘Snapdragon X’”, *Ars Technica*, October 11, 2023, <https://arstechnica.com/gadgets/2023/10/qualcomm-will-try-to-have-its-apple-silicon-moment-in-pcs-with-snapdragon-x/>.

¹²² Alfonso Maruccia, “Qualcomm claims Snapdragon X Elite Arm SoC is faster than Apple's M3,” *Techspot*, December 18, 2023, <https://www.techspot.com/news/101246-qualcomm-claims-snapdragon-x-elite-arm-laptop-soc.html>.

Qualcomm's new 12-core Arm uberchip, the Snapdragon X Elite, and its claims of x86-beating performance and efficiency. But it takes two to tango when it comes a major transition like moving from x86 CPUs to Arm chips.”¹²³

- bb. *Early Snapdragon X Elite benchmark shows Arm CPU is faster than AMD's top-end mobile APU*, Tom's Hardware, February 25, 2024: “The Snapdragon X Elite is highly anticipated as it should be Qualcomm's fastest Arm chip ever, featuring 12 Oryon cores developed by Nuvia, which Qualcomm acquired in January 2021.”¹²⁴
- cc. *Qualcomm Snapdragon X Elite “X1E80100” CPU Gets Geekbenched*, TechPowerup, February 26, 2024: “Last October, Qualcomm introduced Snapdragon X Elite as its most powerful computing processor for PC, but the ARM-based mobile solution is still months away from launch. [. . .] Geekbench Browser’s “CPU Information” section identifies the alleged high-end Snapdragon X Elite processor as an “ARMv8 (64-bit) Family 8 Model 1 Revision 201” part. Average clock speeds were listed as 4.01 GHz (base frequency). Cluster 1 seems to contain eight Nuvia-designed Oryon processor cores, while Cluster 2 receives the remaining four units.”¹²⁵
- dd. *Snapdragon X Elite flexes AI muscles and destroys Intel Core Ultra 7 CPU in image creation head-to-head*, TechRadar, February 27, 2024: “The Snapdragon X Elite is an ARM-based chip as well, and having such silicon powering your laptop, as opposed to an x86 Intel CPU, does have some clear downsides. [. . .] And if the leaks, and indeed Qualcomm's own pre-release benchmark claims, are correct, this is a CPU that could be a genuine rival to Apple's (also ARM-based) M3 silicon for raw performance.”¹²⁶

¹²³ Jeremy Laird, “2024 could be the year the PC finally dumps x86 for Arm, all thanks to Windows 12 and Qualcomm's new chip,” *PC Gamer*, December 24, 2023, <https://www.pcgamer.com/2024-could-be-the-year-the-pc-finally-dumps-x86-for-arm-all-thanks-to-windows-12-and-qualcomms-new-chip/>.

¹²⁴ Matthew Connatser, “Early Snapdragon X Elite benchmark shows Arm CPU is faster than AMD's top-end mobile APU,” *Tom's Hardware*, February 25, 2024, <https://www.tomshardware.com/pc-components/cpus/early-snapdragon-x-elite-benchmark-shows-arm-cpu-is-faster-than-amds-top-end-mobile-apu>.

¹²⁵ “Qualcomm Snapdragon X Elite “X1E80100” CPU Gets Geekbenched,” *TechPowerup*, February 26, 2024, <https://www.techpowerup.com/319630/qualcomm-snapdragon-x-elite-x1e80100-cpu-gets-geekbenched>.

¹²⁶ Darren Allan, “Snapdragon X Elite flexes AI muscles and destroys Intel Core Ultra 7 CPU in image creation head-to-head,” *TechRadar*, February 27, 2024, <https://www.techradar.com/computing/cpu/snapdragon-x-elite-flexes-ai-muscles-and-destroys-intel-core-ultra-7-cpu-in-image-creation-head-to-head>.

V.C.2. Financial Analyst Reports Also Describe the Snapdragon X Elite Processor as “Arm,” “Arm-Based,” and/or “Arm-Compliant.”

35. Financial analyst reporting on the development and launch of Qualcomm’s Snapdragon X Elite product have also presented such products as “Arm-based” and/or “Arm-compliant” in their communications. In some cases, the analyst reporting was based on meetings with Qualcomm executives and/or investor relations where the Qualcomm representatives evidently continued their use of the Arm Trademarks.
- a. In February 2023, J.P. Morgan Chase analysts met with Qualcomm investor relations and subsequently issued a report amplifying Qualcomm’s pre-announcement “Arm-based” communications about the Nuvia Products, seeing a perceived upside for Qualcomm in the Arm-based PC market:
 - i. “ARM-based chipset, Oryon, to start adding meaningful revenues in CY24: **Qualcomm’s ARM-based chipset, Oryon**, is expected to compete head-on with Apple’s M series processors, through which Apple has already proved market readiness for ARM-based processors and has successfully driven market share gains.”¹²⁷ (Emphasis added).
 - b. In May 2023, J.P. Morgan analysts met with Akash Palkhiwala, Qualcomm Chief Financial Officer. Palkhiwala continued Qualcomm’s pre-announcement use of the Arm Trademarks in connection to the upcoming Nuvia Products, leading J.P. Morgan to amplify this use in their subsequent report:
 - i. “**Qualcomm highlighted that its custom ARM CPU, designed by the Nuvia team**, is expected to launch in 2024 concurrent with the typical pace of PC product launches.”¹²⁸ (Emphasis added).
 - c. Following Qualcomm’s October 2023 Snapdragon X Elite announcement, numerous financial analysts again echoed Qualcomm’s “Arm-based” communications from the announcement and thereafter. For example:

¹²⁷ Samik Chatterjee et al., “Qualcomm: F1Q23 Earnings Follow-Up Meeting Takeaways,” J.P. Morgan North American Equities Research, February 09, 2023.

¹²⁸ Samik Chatterjee and Joseph Cardoso, “Qualcomm: J.P. Morgan TMC Conference Takeaways – Alert,” J.P. Morgan North American Equities Research, May 22, 2023.

- i. Rosenblatt Securities, October 25, 2023: “**The Snapdragon X Elite is a 4nm SoC with 12 Qualcomm Oryon (custom Arm-based) CPU cores**, upgraded Adreno GPU, Hexagon NPU (AI processor) [. . .] **The Oryon custom Arm-based CPU was developed by the Nuvia engineering team** Qualcomm acquired Nuvia in 2021. [. . .] Starting with Microsoft designing Windows 11 to run natively on Arm-based processors, we see an opening for Arm-based CPUs to accelerate PC market share gains. In our view, Qualcomm’s high volume, highly integrated, highly connected Snapdragon SoC platform as making breakthroughs in the mobile PC market.”¹²⁹ (Emphasis added).
- ii. Wolfe Research, October 25, 2023: “**QCOM announced a new Arm-based CPU product using Nuvia’s Oryon cores, called the Snapdragon X Elite SoC**. [. . .] We expect CY24 to represent a period of exclusivity for QCOM in the Arm PC market”.¹³⁰ (Emphasis added).
- iii. HSBC, November 2, 2023: “We also believe Qualcomm has a strong product portfolio in edge AI with its next generation smartphone SoC platform, Snapdragon 8, and **the ARM-based PC CPU, Snapdragon X Elite**, could be also led to further upside relative to market expectations in FY24e.”¹³¹ (Emphasis added).
- iv. Wells Fargo Equity Research, November 20, 2023: “As demonstrated by Qualcomm’s recent launch of its **Oryon Arm cores** and SnapDragon X Elite processors, to use one example, semiconductor companies are clearly making a push to differentiate smartphone, tablets and PC processors. . . ”¹³²
- v. J.P. Morgan, November 8, 2023: “The increasing discussion around on-device AI has led investors to focus on the **steppingstones required to eventually enable the ARM opportunity in PCs** outside of Apple as well as eventually Qualcomm cementing a position in the market. The management team highlighted the following milestones for

¹²⁹ Kevin Cassidy, “Snapdragon X Elite Delivers Gen AI to PCs,” Rosenblatt Securities, October 25, 2023.

¹³⁰ Chris Caso, Liz Pate, and Nicholas Welsch-Lehmann, “Takeaways from QCOM Snapdragon Summit,” Wolfe Research, October 25, 2023.

¹³¹ Frank Lee and Pukkit Aggarwal, “Buy: Improving smartphone outlook in-line with our view; room for more upside,” HSBC Global Research, November 2, 2023.

¹³² Gary Mobley and Travis Poulin, “ARM: From a Tiny Acorn to Tall Oak; Initiating Coverage,” Wells Fargo Equity Research, November 20, 2023.

investors to look to: 1) the already announced Snapdragon X Elite launch. . .”.¹³³ (Emphasis added).

- vi. Rosenblatt Securities, January 24, 2024 “The X Elite, which includes the Arm-based Orion [sic] CPU, will have a presence in enterprise notebook PCs. . . The long-awaited Snapdragon X Elite featuring the Oryon CPU and upgrade Hexagon NPU is expected to be found in PCs in mid-2024. We remain positive on the IoT segment to drive diversification.”¹³⁴ (Emphasis added).
- vii. HSBC, February 1, 2024: “We believe an important potential catalyst for Qualcomm for further re-rating will be its upcoming Arm-based AI CPU, Snapdragon X Elite, to be used in AI PCs.”¹³⁵ (Emphasis added).

V.D. Professor Steckel’s Assertions Do Not Refute My Findings Regarding Likelihood of Confusion

V.D.1. Professor Steckel Fails to Address Qualcomm’s Stand-Alone Use of the Term “Arm” and Baselessly Asserts that the Terms “Arm-Based” and “Arm-Compliant” Refer Only to the Technical Attributes of a Chip

- 36. I have already noted that Professor Steckel never addresses Qualcomm’s stand-alone use of the term “Arm” to describe its Nuvia Products.¹³⁶ In addition, he asserts without any basis that the terms “[REDACTED] . . . [REDACTED].¹³⁷
- 37. Professor Steckel’s flawed assertions are contradicted by the numerous examples discussed at length above. As I explain in my Opening Report and in Section V above, Qualcomm’s use of these terms is likely to mislead other relevant industry participants into believing that there is a

¹³³ Samik Chatterjee, Joseph Cardoso, and Priyanka Thapa, “Qualcomm Key Takeaways from CEO and CFO Meeting,” J.P. Morgan, November 8, 2023.

¹³⁴ Kevin Cassidy, “Earnings Preview: First Inning of Smartphone Upgrade Cycle,” Rosenblatt Securities, January 24, 2024.

¹³⁵ Frank Lee and Pulkit Aggarwal, “Buy: 1Q24 Beat; soft 2Q24 outlook from seasonality,” HSBC Global Research, February 1, 2024.

¹³⁶ Although Professor Steckel asserts that in my Opening Report, I identified only two examples of Qualcomm using the stand-alone “Arm” modifier, Section V.B. above highlights several other instances in which the stand-alone “Arm” modifier is used by Qualcomm in connection with the Snapdragon X Elite.

¹³⁷ Steckel Rebuttal Report, ¶ 66. See also, Steckel Rebuttal Report, ¶ 85.

connection to Arm's brand. Thus, neither Professor Steckel's failure to recognize Qualcomm's unlicensed use of the stand-alone "Arm" modifier, nor his unsupported attempt to redefine the [REDACTED] change my opinion on this matter.

V.D.2. Professor Steckel Provides No Support for His Claim that Qualcomm's Use of "Arm-based" and Other Phrases Constitutes Permissible "Referential Use."

38. Although Professor Steckel claims that Qualcomm's use of the terms "Arm-based" and other similar phrases is permissible "referential use," it is my understanding that his purported support for these claims is based on a misreading of Arm's Trademark Use guidelines. In particular, Professor Steckel mischaracterizes that "Arm's own publicly available Trademark Use guidelines . . . explicitly instructs third parties to describe their products as 'Arm-based' in order to accurately describe the relationship between the third-party technology and Arm's technologies."¹³⁸ In fact, it is my understanding that the Trademark Guidelines do not "instruct" third parties to describe their products as "Arm-based," as Professor Steckel suggests. Moreover, Qualcomm's use does not fall within the Guidelines, and Professor Steckel provides no relevant support for his assertions that the terms "Arm-based" and "Arm-compliant" mean anything other to industry participants than what I explained in Section V.A¹³⁹
39. Instead, it is my understanding that the Trademark Guidelines state that "You may refer to Arm-based products by using the word '-based' between the relevant Arm trademark and the relevant third-party product. In this situation, you may use any appropriate noun after the word

¹³⁸ Steckel Rebuttal Report, ¶ 84.

¹³⁹ For example, Professor Steckel appears to misinterpret the testimony of Mr. Simon Segars and Arm's own 2023 F-1 filing to incorrectly speculate that "software designers refer to their technology written to interoperate on Arm technologies as 'Arm-based.'" (See Steckel Report, ¶85 and fn. 132) A review of these sources suggests that Mr. Segars' statement only qualifies his understanding of an "Arm-based server chip" to represent "a silicon chip for use in servers that would execute the Arm. . .[a]rchitecture [that] does go beyond the instruction set architecture." (Deposition of Simon Segars, November 16, 2023, 39:25-40:6.) In addition, Professor Steckel also appears to misinterpret a passage from Arm's own 2023 F-1 that says nothing about how software developers refer to their technology written to interoperate on Arm, and simply highlights the global popularity and pervasiveness of the Arm CPU and the Arm ISA. (See ARM-01259705 at -9825.) Similarly, Professor Steckel misquotes Mr. Armstrong's testimony in which Mr. Armstrong neither mentions anything about "software designers that describe their software as 'Arm-based,'" nor does it have any relevance for what the terms "Arm-based" and "Arm-compliant" mean to industry participants. (See Steckel Report, ¶ 85 and fn. 136).

‘-based’ if it is **accurate, fair, and not misleading and it complies with these guidelines.**”
(Emphasis added.)¹⁴⁰

40. Thus, contrary to Professor Steckel’s assertions, it is my understanding that Qualcomm’s use of “Arm-based” in connection with Nuvia Products is not “accurate, fair, and not misleading.” As described in my Opening Report, Qualcomm’s use of “Arm-based” and “Arm-compliant,” among other phrases, likely creates confusion for customers by falsely signaling that these unlicensed products have a connection to Arm’s brand and/or have been licensed, verified and validated by the Arm brand, particularly since Qualcomm is an Arm partner with respect to other products.
 41. Contrary to Professor Steckel’s assertions, numerous examples show that Qualcomm’s unauthorized use of the Arm Trademarks to describe the [REDACTED] mirrors its authorized use of the Arm Trademarks to describe other, [REDACTED]

¹⁴⁰ See QCARM_7517739 – 744 at 741 (“Arm Trademark Use Guidelines”) (emphasis added). Moreover, it is my understanding that this is the case, whether the license is ALA or TLA—i.e., neither type of license provides a general right to use the ARM Marks. Thus, the ALA licenses to implement Arm designs in a custom [REDACTED]—have clauses requiring the licensee to follow Arm’s explicit “Trademark Guidelines,” specifying how the Arm mark can be used in promotion and technical documentation. Accordingly—and contrary to Professor Steckel’s contention—[REDACTED]

¹⁴² “Snapdragon Fact Sheet,” Qualcomm, accessed March 22, 2024,
https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/Snapdragon_Fact_SheetJune.pdf,

Continued next page.

b. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

42. Professor Steckel also asserts, incorrectly and without adequate support, that “Qualcomm . . . can. . . refer to Arm’s products and services in describing their own products and services without (falsely) signifying affiliation or approval between them.”¹⁴⁵ Professor Steckel does not contend with the likelihood of confusion, nor does he explain why Qualcomm’s mention of Arm, Arm-based, or Arm-compliant in connection with unlicensed products (that Arm has filed a lawsuit to enjoin Qualcomm’s use and sale of such products) fails to signify affiliation with the Arm brand. Again, Professor Steckel fails to engage with what I understand to be the Trademark Guidelines’ limitation to use that is “accurate, fair, and not misleading.” In sum, it is my understanding that Qualcomm’s use of “Arm-based” and other phrases is not permissible “referential use,” but is infringing use that is likely to confuse customers and cause harm to Arm.

and “Enabling the rise of the smartphone: Chronicling the developmental history at Qualcomm,” *Qualcomm Technologies, Inc*, December 10, 2020, https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/presentation_-_enabling_the_rise_of_the_smartphone_-_web.pdf81.pdf.

¹⁴³ “Qualcomm Snapdragon 600 Processor APQ8064 Data Sheet,” *Qualcomm Technologies, Inc*, February 2016, https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/snapdragon_600_apq_8064_data_sheet.pdf, and “Qualcomm Snapdragon 600E Embedded Platform,” *Qualcomm Technologies, Inc*, accessed March 22, 2024, https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/snapdragon-600e-product-brief_87-pc346-1-c_0.pdf.

¹⁴⁴ “Qualcomm Begins Commercial Sampling of World’s First 10nm Server Processor and Reshapes the Future of Datacenter Computing,” *Qualcomm*, December 6, 2016, <https://www.qualcomm.com/news/releases/2016/12/qualcomm-begins-commercial-sampling-worlds-first-10nm-server-processor-and-and> and “Meet Qualcomm Centriq 2400, the world’s first 10-nanometer server processor,” *Qualcomm*, December 6, 2016, <https://www.qualcomm.com/news/onq/2016/12/meet-qualcomm-centriq-2400-worlds-first-10-nanometer-server-processor>, and Barry Wolford, Thomas Speier, and Dileep Bhandarkar, “Qualcomm Centriq 2400 Processor,” *Qualcomm*, August 22, 2017, p. 14, https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/qualcomm_centriq_2400_hotchips_final_0.pdf.

¹⁴⁵ Steckel Report, ¶ 84.

V.D.3. Professor Steckel Misinterprets My Prior Use Examples and Wrongly Asserts that My Likelihood of Confusion Analysis Is Based on Historical Information

43. According to the Steckel Rebuttal Report, my conclusion that Qualcomm's use of the Arm Trademarks is likely to create confusion "is partly based on the examples of Qualcomm's prior use of the Arm Trademarks in connection with [non-ALA-licensed] CPU cores, rather than Qualcomm's [ALA-licensed] custom cores."¹⁴⁶ Contrary to Professor Steckel's assertions, however, the likelihood of confusion analysis in my Opening Report is *not* based on Qualcomm's prior use of the Arm Trademarks. Instead, it is based directly on Qualcomm's actual communications describing the Nuvia Products using the Arm brand, including Qualcomm's various public statements, and third-party media mentions.¹⁴⁷
44. Moreover, as I explain below, another reason that Qualcomm's misstatements about the Snapdragon X Elite are likely to confuse customers is that Qualcomm uses the same Arm Trademarks in describing both (i) *unlicensed* Nuvia Products and (ii) *Arm-licensed* products that are like *unlicensed* Nuvia Products.

V.D.3.a. Professor Steckel Incorrectly Claims that my Examples of Qualcomm's Use of the Arm Trademarks Are Misplaced

45. Professor Steckel incorrectly asserts that Qualcomm's use of the Arm Trademarks to describe the [REDACTED]
[REDACTED]
[REDACTED] As I explain below, Professor Steckel is incorrect for three reasons. *First*, the terms "Arm-based" and

¹⁴⁶ Steckel Report, ¶ 64.

¹⁴⁷ See, e.g., Dhar Opening Report, ¶ 14 ("Qualcomm's prior history and usage of Arm's Trademarks [...] demonstrate a high likelihood that Qualcomm will continue to use Arm's Trademarks in connection with its future products, particularly Nuvia Products."). See also, Dhar Opening Report, ¶ 15 ("I also understand from the materials I reviewed that Qualcomm has used Arm's Trademarks in connection with its future Nuvia Products [...] Qualcomm's use of Arm's Trademarks is likely to cause customer confusion. Thus, Qualcomm's unauthorized use of the Arm Mark for Nuvia Products is likely to mislead customers and other relevant industry participants into believing that there is some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm.").

“Arm-compliant” communicate a connection to the Arm brand regardless of the product type.¹⁴⁸

Second, Qualcomm uses these terms correctly to describe both its TLA-licensed and

ALA-licensed products in a similar manner.¹⁴⁹ **Third**, [REDACTED]

[REDACTED]
[REDACTED]

V.D.4. Contrary to the Assertions of Professor Steckel, Qualcomm’s Communication and Description of the Snapdragon X Elite Processor as “Arm,” “Arm-Based,” and/or “Arm-Compliant” Is Likely to Confuse Customers Regardless of Their Sophistication or Efforts to Exercise a Higher Degree of Care

46. I agree with Professor Steckel that many B2B customers exercise a higher degree of care (time and effort) when making a purchasing decision.¹⁵¹ However, I disagree that exercising greater care would make clear that there is no connection between the Nuvia Products and Arm. **First**, as discussed at length above, Qualcomm frequently (and inaccurately) refers to the Nuvia Products as being Arm, Arm-based, and/or Arm-compliant. Because customers are likely to view Qualcomm as a reputable company, they will have little reason to question its claims.¹⁵² **Second**,

¹⁴⁸ As explained in my Opening report and in Section V.A above, the terms [REDACTED]

¹⁴⁹ Contrary to Professor Steckel’s assertion—and as I show in numerous examples—Qualcomm uses these terms correctly to describe both its TLA-licensed and its ALA-licensed products. Such demonstrated and authorized use of the terms “Arm-based” and “Arm-compliant” by Qualcomm is consistent with the meaning communicated to industry participants by these terms as explained in my Opening Report and in Section V.

¹⁵⁰ Professor Steckel asserts that the “Dhar Report inappropriately assumes that past usage indicates future usage, particularly under different circumstances,” in part because it cites to “Qualcomm’s prior use of the Arm Trademarks in connection with Arm-built CPU cores, rather than Qualcomm’s custom-designed cores” (Steckel Report, ¶¶ 64-65.)

¹⁵¹ In fact, in my Opening Report, I explained that buyers in the B2B market are more sophisticated than general consumers, noting that “the degree of expertise among buyers and the often complex buying process at many firms means that many B2B brands emphasize the performance benefits and tangible points of differentiation of the product, the reduction of risk associated with choosing the brand, relative to many B2C brands. . . .” (Dhar Opening Report, ¶ 96.)

¹⁵² See, e.g., Philip Kotler and Kevin Lane Keller, *Marketing Management*, 15th ed., (Pearson, 2016), p. 209 (“Trust is a firm’s willingness to rely on a business partner. It depends on several interpersonal and interorganizational factors, such as the firm’s perceived competence, integrity, honesty, and benevolence. Personal interactions with

Continued next page.

[REDACTED] This creates a further reason to believe that customers are likely to falsely believe that there is connection to the Arm brand and/or the Nuvia Products are [REDACTED]. **Third**, the third-party press also frequently refers to the Nuvia Products as being Arm, Arm-based, and/or Arm compliant. As explained above, this press coverage demonstrates that sophisticated market participants are likely to be confused by Qualcomm's unlicensed use of these terms. Moreover, the third party press' misuse of these terms broadens the encounter of Qualcomm's infringing actions even when Qualcomm itself may discontinue such usage. Thus, it is my opinion that customers are likely to be confused by Qualcomm's misstatements.

V.D.5. Contrary to the Assertions of Professor Steckel, It Is Not Necessary to Demonstrate Actual Confusion

47. Professor Steckel appears to suggest that my conclusion is not sufficiently substantiated because I did not show evidence of actual confusion. However, it is my understanding that there was no requirement to show actual confusion because (i) the Nuvia Products have not yet been launched and (ii) there is a wealth of available materials that point to the likelihood of confusion in various ways. Moreover, I believe that even an analysis of customers after the launch of the Snapdragon X Elite may not be particularly informative. This is because a customer purchasing a Qualcomm product will not be alerted to the lack of actual connection between Qualcomm's product and Arm's brand through their purchase experience. In fact, nothing about the customer's purchase experience would signal to them that they are not in fact purchasing an Arm-licensed product.
48. Moreover, the analysis contained in my Opening Report demonstrating a likelihood of confusion was (i) well-substantiated; (ii) based on standard, commonly accepted methodology; (iii) and is consistent with other peer-reviewed work. In conducting this analysis, I reviewed extensive

employees of the firm, opinions about the company as a whole, and perceptions of trust will evolve with experience."); Michael Pirson, Kirsten Martin, and Bidhan Parmar, "Public Trust in Business and Its Determinants," *Business & Society* 58(1) (2019): 132-166; Arjun Chaudhuri and Morris B Holbrook, "The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty," *Journal of Marketing* 65(2) (2001): 81-93; Sandra J. Suchar and Shalene Gupta, "The Trust Crisis," *Harvard Business Review*, July 16, 2019, <https://hbr.org/2019/07/the-trust-crisis?ab=seriesnav-bigidea>.

materials related to this matter and formulated opinions based on those materials, in accordance with accepted academic principles regarding the concept of a brand, including strong and distinctive brand identity, and the role of brand image for B2B relationships. I also analyzed extensive materials regarding Qualcomm’s past and current usage of the Arm Trademarks and third-party mentions of the Arm Trademarks related to Qualcomm’s Nuvia Products. Based on those materials, I applied commonly-accepted criteria for evaluating brand strength and impact on a brand to address “[w]hether Qualcomm’s unlicensed use of the Arm Trademarks in connection with ‘Nuvia Products’ . . . would likely result in confusion. . . [and] is likely to cause harm by impacting the brand or result in loss of sales by Arm.”¹⁵³ Based on my extensive research and analysis, and drawing from my expertise, I reached the conclusion that Qualcomm’s use of the Arm Trademarks is likely to result in customer confusion, and—as discussed in Section VI—harm to Arm, including its brand.

49. The analysis contained in my Opening Report demonstrating a likelihood of confusion also draws on my extensive experience and qualifications. I am qualified to opine on the impact of Qualcomm’s use of the Arm Trademarks and the impact of such use on Arm’s brand from the perspective of a skilled branding expert and educator. As described in my Opening Report, I have experience and specialized knowledge in the field of branding and marketing. I teach several courses at Yale University’s School of Management on consumer behavior and marketing. I hold a Ph.D. and Master of Science in Business Administration from the University of California at Berkeley. Moreover, I have published more than 90 papers in journals, proceedings, as book chapters, and in leading marketing, psychology, and management journals on consumer psychology, research, marketing research and science, and other related topics.
50. Professor Steckel’s contention that “the unique context of B2B transactions” undermines my assessment of “the likely confusion caused by Qualcomm’s use of the term ‘Arm-based’ or ‘Arm-compliant’” is likewise baseless.¹⁵⁴ As noted above, Professor Steckel repeatedly states that a false designation—stating “Arm” or “Arm-based”—would be unlikely to cause sophisticated consumers to believe that there is a connection between the Nuvia Products and the Arm brand, and/or that they are licensed, verified, or validated by Arm. These assertions are not

¹⁵³ Dhar Opening Report, ¶ 9.

¹⁵⁴ Steckel Rebuttal Report, ¶ 70.

supported, particularly in this matter where Qualcomm is using the exact mark “Arm,” as well as the modifiers “Arm-based” and “Arm-compliant.” Thus, as I opined in my Opening Report, “Qualcomm’s unauthorized use of the Arm Mark for Nuvia Products is likely to mislead customers and other relevant industry participants into believing that there is some connection as to source, affiliation, sponsorship, or approval between Arm and Qualcomm.”¹⁵⁵

51. Further, my Opening Report expressly contemplated the differences between B2B and B2C markets when arriving at the conclusion that Qualcomm’s unauthorized use of the Arm Trademarks is likely to cause confusion and harm. I articulated that buyers in the B2B market are more sophisticated than general consumers, noting that “the degree of expertise among buyers and the often complex buying process at many firms means that many B2B brands emphasize the performance benefits and tangible points of differentiation of the product, and the reduction of risk associated with choosing the brand, relative to many B2C brands.”¹⁵⁶ As I stated in my Opening Report, Arm is an important element of the Nuvia Products, and the sophistication of customers in the B2B market will not eliminate the effect of a false designation. Moreover, to the extent that customers think that the Nuvia Products have a connection to the Arm brand and/or are licensed, verified, or validated by Arm, it is likely that sales will be diverted from other products that are, in fact, properly developed under an Arm license. For these reasons, Qualcomm’s unauthorized use of the Arm Trademarks is likely to cause confusion in the B2B market.
52. It is also important to recognize that Professor Steckel did not conduct a survey to support his own opinion that there is *not* likely to be confusion. He merely asserts that my opinions “that consumers are being confused, or are highly likely to be confused, are unsupported by any evidence, empirical or otherwise, and cannot be relied upon.”¹⁵⁷ These assertions with regard to likelihood of confusion are baseless, and Professor Steckel notably did not conduct a consumer survey despite contending that my conclusions are unsupported without one.

¹⁵⁵ Dhar Opening Report, ¶ 15.

¹⁵⁶ Dhar Opening Report, ¶ 96.

¹⁵⁷ Steckel Rebuttal Report, ¶ 91.

VI. Qualcomm's Unlicensed Use of the Arm Trademarks Is Likely to Result in Harm, and Professor Steckel Fails to Provide any Evidence to the Contrary

VI.A. I Used Well-Established Principles to Determine that Qualcomm's Unlicensed Use of the Arm Trademarks is Likely to Result in Harm

53. I have already demonstrated that Qualcomm's unlicensed use of the Arm Trademarks is likely to confuse customers. As explained in my Opening Report, “[t]he use of the familiar and trusted Arm brand will enable Qualcomm to communicate that the Nuvia Products are licensed and have been verified and validated by Arm, thereby facilitating acceptance and adoption of such products, and enabling Qualcomm to access the broad marketplace associated with the Arm ecosystem. Thus, by using the Arm Trademarks without Arm's permission, Qualcomm will draw on the equity of the Arm Mark to increase the likelihood of acceptance of its products.”¹⁵⁸
54. Moreover, I rely upon my credentials and experience as a marketing expert, along with established principles in the field of academic marketing, to determine that Qualcomm's unlicensed use of the Arm Trademarks is likely to result in harm. As I explain in my Opening Report, Qualcomm's unlicensed use of the Arm Trademarks will cause harm to Arm through two separate channels.¹⁵⁹
 - a. **First**, Qualcomm's unlicensed use of the Arm Trademarks will cause Arm to lose control of its brand and goodwill. Qualcomm's unlicensed use of the Arm Trademarks to describe the Nuvia Products links the Arm brand to both Qualcomm and the Nuvia Products, which is not under Arm's control. Through this linkage, any negative attributions and inferences associated with Qualcomm and/or the Nuvia Products can spillover to Arm. In fact, academic literature establishes that, in instances where two companies partner on a co-branding or

¹⁵⁸ Dhar Opening Report, ¶ 126.

¹⁵⁹ Dhar Opening Report, ¶¶ 127-132. I also state in my Opening Report that [REDACTED]

[REDACTED] (Dhar Opening Report, ¶ 133). Supporting this finding, I explain in my Opening Report and in Section IV above that Arm's processors and business model offer unique customer benefits, which is further indicated by Arm's sales success and renown. See, e.g., Dhar Opening Report, Sections VI.A, VI.C.1, and VIII.B.

composite branding strategy, negative experiences with the co-branded product or one of the partner brands can result in negative spillovers to the other partner brand.¹⁶⁰

- b. **Second**, Qualcomm's unlicensed use of the Arm Trademarks will likely influence purchase of Qualcomm's Nuvia Products (because of their purported connection to the Arm brand, including a license, verification, or validation from Arm) rather than products from legitimate Arm licensees. This can be expected to harm Arm by placing downward pressure on its licensing revenues. The academic literature explains how this diversion of sales could occur. Consumer purchase decisions are influenced by points-of-difference ("PODs") and points-of-parity ("POPs"). PODs are "attributes or benefits that consumers strongly associate with a brand, positively evaluate, and believe they could not find to the same extent with a competitive brand."¹⁶¹ In contrast, POPs are "attribute or benefit associations that are not necessarily unique to the brand but may in fact be shared with other brands."¹⁶² In the current matter, legitimate Arm licensees are not able to benefit from the Arm Trademarks as a POD when Qualcomm falsely uses the Arm brand to describe the Nuvia Products. Instead, the Arm Trademarks become a POP between legitimate Arm licensees and Qualcomm. By losing a key POD, legitimate Arm licensees are likely to lose sales to Qualcomm.

VI.B. Professor Steckel Provides No Evidence that Contradicts My Finding of Harm

55. Although Professor Steckel asserts that my conclusions about harm to Arm's brand and goodwill are unsupported, he provides no evidence that contradicts my finding of harm and makes a number of incorrect and/or irrelevant claims.¹⁶³ As an initial matter, he asserts that I have not put forward any empirical evidence to suggest that Qualcomm's unlicensed use of the Arm Trademarks would have an effect on Arm's brand and goodwill.¹⁶⁴ However, he fails to recognize that I cannot provide evidence of actual harm to Arm's brand and goodwill—nor am I

¹⁶⁰ See, e.g., Bernard L. Simonin and Julie A. Ruth, "Is a Company Known by the Company It Keeps? Assessing the Spillover Effects of Brand Alliances on Consumer Brand Attitudes," *Journal of Marketing Research* 35(1) (1998): pp. 30-42; Aron M. Levin, J. Charlene Davis, and Irwin Levin, "Theoretical and Empirical Linkages Between Consumers' Responses to Different Branding Strategies," *Advances in Consumer Research* 23 (1996): pp. 296-300.

¹⁶¹ Philip Kotler and Kevin Lane Keller, *Marketing Management*, 15th ed., (Pearson, 2016), p. 300.

¹⁶² Philip Kotler and Kevin Lane Keller, *Marketing Management*, 15th ed., (Pearson, 2016), p. 302.

¹⁶³ See generally, Steckel Rebuttal Report, Section VI.A.

¹⁶⁴ Steckel Reply Report, ¶ 95.

required to do so—because the launch of the Nuvia Products has not yet occurred.¹⁶⁵ Moreover, I have provided ample evidence indicating that the third-party press has been confused by Qualcomm’s repeated and false assertions that the Snapdragon X Elite is “Arm-based” and/or “Arm-compliant.”¹⁶⁶

56. In his attempt to refute my conclusions about harm to Arm’s brand and goodwill, Professor Steckel also raises the following two irrelevant points.
 - a. **First**, Professor Steckel asserts that there is a perception within the industry that Qualcomm’s custom cores have performed better than Arm-built cores and are likely to be perceived as higher quality.¹⁶⁷ However, he fails to recognize that this statement is irrelevant to the fact that Qualcomm’s infringement will cause Arm to lose control of its brand and goodwill. Moreover, even if I were to accept for the sake of argument that Qualcomm’s custom cores are currently perceived as better than Arm-built cores, this does not prevent future harm to Arm’s brand because of Qualcomm’s infringing actions. As explained above, negative spillovers can occur when a company loses control of its brand.
 - b. **Second**, Professor Steckel asserts that I have failed to explain whether and how the sophisticated purchasers of the Nuvia Products would connect any negative features of these products with Arm.¹⁶⁸ However, as discussed above, academic literature establishes that, in instances where two companies partner on a co-branding or composite branding strategy, negative experiences with the co-branded product or one of the partner brands can result in negative spillovers to the other partner brand.

¹⁶⁵ See, e.g., Steckel Reply Report, ¶ 96 (“Critically, the Dhar Report ignores evidence in the record contrary to his conclusion, including deposition testimony from Arm’s own witnesses stating that they were unaware of any actual harm to Arm, including from loss of goodwill or purported consumer confusion in connection with Arm Trademarks.”), ¶ 98 (“The Dhar Report further states ‘Qualcomm’s unauthorized use of Arm’s Trademarks means that how customers view the Arm Mark is now connected to the quality and outcomes associated with the Nuvia products,’ and that any potential negative customer experience with the Nuvia Products could ‘place Arm’s valuable brand asset at risk.’ This assertion is also speculative, forward-looking, and unsupported.”) However, no evidence of (i) actual harm or (ii) negative experience with the Nuvia Products is necessary now since the launch of the Nuvia Products has not yet occurred.

¹⁶⁶ Section V.B. provides examples of Qualcomm’s misstatements and Section V.C. shows that the third-party press and analyst reports reiterate Qualcomm’s misstatements and thereby magnify their impact.

¹⁶⁷ Steckel Reply Report, ¶ 99.

¹⁶⁸ Steckel Reply Report, ¶¶ 98, 100.

57. Finally, Professor Steckel seeks to refute my conclusions about Arm's loss of licensing revenue—through diverted sales from authorized users of the Arm Trademarks, but his criticisms are unfounded. *First*, Professor Steckel fails to recognize that Qualcomm's unlicensed use of the terms "Arm," "Arm-based," and "Arm-compliant" is likely to confuse customers. Moreover, as I explained, Qualcomm's unlicensed use of the terms "Arm," "Arm-based," and "Arm-compliant" is likely to confuse customers *regardless of their sophistication or efforts to exercise a higher degree of care*.¹⁶⁹ *Second*, Professor Steckel fails to recognize that I cannot provide evidence that sales are being diverted from authorized users of the Arm Trademarks since the launch of the Nuvia Products has not yet occurred. Finally, I have explained in my Opening Report and in Section IV above that customers who might have sought out an Arm product because of the value that Arm provides may be diverted to Qualcomm's Nuvia Products.¹⁷⁰

I declare, under penalty of perjury, that the foregoing is true and correct.

Executed on March 25, 2024 in New Haven, CT.



Ravi Dhar
March 25, 2024

¹⁶⁹ Steckel Reply Report, ¶ 102.

¹⁷⁰ Dhar Opening Report, Sections VI.A, VI.C.1, and VIII.B.

APPENDIX A

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APPENDIX A: LIST OF MATERIALS RELIED UPON PLEADINGS

1. Complaint, Arm Ltd. v. Qualcomm Inc., C.A. No. 1:22-1146, August 31, 2022, and Exhibits thereto.
2. Defendants' Answer and Defenses to Plaintiff's Complaint and Jury Demand and Defendants' Counterclaim, Arm Ltd. v. Qualcomm Inc., C.A. No. 1:22-1146, September 30, 2022.
3. Defendants' Answer and Amended Counterclaims, Arm Ltd. v. Qualcomm Inc., C.A. No. 1:22-1146, October 26, 2022.
4. Plaintiff's Answer to Amended Counterclaims, Arm Ltd. v. Qualcomm Inc., C.A. No. 1:22-1146, November 15, 2022.
5. USPTO Trademark Registration No. 5,692,669 and filed documents.
6. USPTO Trademark Registration No. 5,692,670 and filed documents.

FILINGS IN OTHER PROCEEDINGS

7. Complaint, *In the Matter of Nvidia Corporation, Softbank Group Corporation, and Arm, Ltd.*, Docket No. 9404, Federal Trade Commission, December 2, 2021.

EXPERT REPORTS

8. Expert Report of Ravi Dhar, *Arm Ltd. v. Qualcomm Inc, Qualcomm Technologies, Inc., and NUVIA Inc.* (C.A. No. 22-1146-MN), December 20, 2023.
9. Expert Rebuttal Report of Joel Steckel, *Arm Ltd. v. Qualcomm Inc, Qualcomm Technologies, Inc., and NUVIA Inc.* (C.A. No. 22-1146-MN), February 27, 2024.

DEPOSITION TRANSCRIPTS

10. 30(b)(6) Deposition of Jonathan Armstrong (Arm), December 8, 2023.
11. Deposition of Cristiano Amon (Qualcomm), November 15, 2023.
12. Deposition of Michael Roberts (Qualcomm), November 28, 2023.
13. Deposition of Nitin Sharma (Nuvia and Qualcomm), October 27, 2023.
14. Deposition of Paul Williamson (Arm), November 9, 2023.
15. Deposition of Simon Segars (Arm), November 16, 2023.
16. Deposition of Will Abbey (Arm), October 27, 2023.

ACADEMIC MATERIALS

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***Note I also relied upon any other documents cited in either this report and/or my Opening Report, but not mentioned in this list.*